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THE Compleat Family Physician; OR, UNIVERSAL MEDICAL REPOSITORY.

CONTAINING THE
CAUSES, SYMPTOMS, PREVENTIONS, AND CURES,
Of all the various Maladies to which Human Nature is subject, from the BIRTH to the GRAVE.

INCLUDING
The Diseases peculiar to SEAMEN, as well as those of particular Climates; such as the EAST and WEST INDIES, Coast of GUINEA, GREENLAND, NEWFOUNDLAND, &c. with the proper Methods of treating LUNATICKS, and Persons who are subject to FITS of any Kind.—And the best and most approved Preservatives against Epidemick and Contagious Diseases; such as the *Plague*, *Putrid Fevers*, *Gaul Distemper*, and other Infections.

TOGETHER WITH
An Account of all the celebrated SPAS—not only of this Country, but such others also, as are of great Repute in other Parts of the World, and the *Waters* of which are usually imported into these Kingdoms; with some Observations on the Virtues and Efficacy of SEA WATER and *Bathing*.

LIKEWISE,
Strictures on QUACKERY in general; and a candid Examination of the respective Merits of
James's Powder, Norton's Drops, Ormskirk Powder, Ward's Drops,
AND OTHER POPULAR MEDICINES.

With a full Account of the various Kinds of POISONS, both Animal, Vegetable, and Mineral; and the best Methods of counteracting their respective Effects.—Also, the Means to be made use of for restoring *Drowned or Strangled Persons*, as published by the HUMANE SOCIETY; and the *Plan* of Dr. HAWES, Secretary to that benevolent Institution, for preventing Persons being *buried Alive*.

TO WHICH IS ADDED,
THE FAMILY SURGERY.

CONTAINING
Directions for treating *Green and Old Wounds*; proper STYPTICKS for immediately stopping the Blood in all Cases; and infallible Applications for the Cure of the *Bite of Mad Animals*, as well as the *Bite or Sting of venomous Animals and Insects*. With some approved Receipts for the Cure of *Ring-worms*, *Warts*, *Corns*, *Bruises*, *Carbuncles*, &c. and Directions for managing the *Eyes*, *Ears*, *Teeth*, *Nails*, &c. so as to prevent *Blindness*, *Deafness*, and *Lameness in the Feet*.

ALSO,
The proper Methods of making and using *Salves*, *Ointments*, *Pills*, *Cataplasms*, *Poultices*, *Fomentations*, *Embrocations*, &c. &c.

TOGETHER WITH
THE COMPLEAT BRITISH HERBAL.

AND
A LIST of all such *Drugs*, *Chymicals*, &c. as are directed to be used in the different Preparations, with their PRICES at APOTHECARIES HALL, LONDON.

THE WHOLE FORMING
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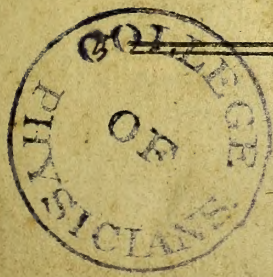
CALCULATED
As well to assist Gentlemen of the Faculty, as for the Use of *private Families*; and in which the utmost Care is taken to recommend such Remedies as are most plain and simple, and of Course the least expensive, and readiest to be procured.

By HUGH SMYTHSON, M.D. Late Student at the University of LEYDEN.

When, on the Bed of loath'd Disease,
With streaming Eyes, Affection sees
A Child, a Husband, Wife, or Friend,
And fears the much-lov'd Victim's End;
How sighs the Sympathetick Heart,
For Knowledge in the Healing Art!

How fears, lest Want of Skill prevent
The kind Assistance fondly meant!
No more, by anxious Dread possess'd,
Shall Terror fill the friendly Breast;
Whilst in our Labours are combin'd
The healing Arts of all Mankind.

L O N D O N :
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TO THE
MANY NOBLE, HUMANE, AND BENEVOLENT CHARACTERS,
BY WHOSE
MUNIFICENCE AND GENEROSITY
THE
VARIOUS HOSPITALS, INFIRMARIES, DISPENSARIES,
AND
OTHER CHARITABLE INSTITUTIONS,
WHICH
MARK WITH SUCH DISTINGUISHED LUSTRE
THE
HUMANITY OF THE BRITISH NATION,
ARE
SUPPORTED AND MAINTAINED,
THIS WORK,
CALCULATED TO PROMOTE AND EXTEND THEIR BENIGN INTENTION,
THE ALLEVIATION OF HUMAN MISERY,
IS,
WITH THE HIGHEST ESTEEM, REGARD AND VENERATION,
MOST RESPECTFULLY INSCRIBED,
BY THEIR DEVOTED
AND OBEDIENT SERVANT,

AUGUST 4,
1781.

H. SMYTHSON.

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INTRODUCTION.

LITTLE apology is necessary for introducing to the world, a work calculated to promote the happiness of mankind; and the *preservation*, and *restoration* of HEALTH, the first grand article in the enumeration of earthly blessings, are subjects of a nature so very agreeable and interesting, that few arguments will be required, to persuade the world to receive with regard, and treat with attention, every attempt to facilitate objects of such universal importance.

The tender structure of the human frame, so *fearfully and wonderfully made*, the nice and delicate organs of sense, the force and effects of the passions and desires, and the great variety of dangers and maladies *which flesh is heir to*, are such powerful incentives to the exertion of every faculty of self-defence; that he who offers to the public improvements in the arts of healing, or promulgates in familiar language, and on easy terms, those already known, he who will venture to strip the science of physic of abstruse and technical expression, and place it within the reach of ordinary men, will not be deceived in his expectations of the thanks and applause he deserves.

Of the many thousand volumes which have been published on a subject of so much consequence, very few have even pretended to contain a *regular* and *complete system*: different authors have treated of different disorders; the physical library has been swelled to an enormous bulk; the works of physicians have been loaded with the hypotheses of the ancients, or conjectural ideas of their own, conveyed in languages of which the far greater part of mankind are ignorant, and enveloped in the dark clouds of professional mystery.

In the remoter provinces of the kingdom of Great Britain, (and, indeed, in every part of it, except the metropolis and its environs) medical assistance is placed at such a distance from the major part of the inhabitants, and the expence of obtaining it is so considerable, that the patient's case frequently becomes desperate before it can be procured, or his circumstances preclude him from seeking it at all.

Thus equally incapable of having recourse to the theory of physic, by perusing the voluminous productions of so many hundred authors, and of acquiring help in the hour of sickness, from the distance of medical practitioners, great numbers of individuals are left to the operations of disease, or the struggles of nature, unassisted by the numerous and providential discoveries of art; unless where a county hospital here and there presents it's aid, and the benevolent hand of some compassionate landlord, by mere accident residing on the spot, enables the unhappy victim to avail himself of the charitable institution.

To remove obstructions to the acquirement of such a degree of medical knowledge, as may enable the diseased to have immediate recourse to proper remedies, without the delays occasioned by sending many miles for a physician or apothecary, and without incurring an expence which in many cases they are ill able to bear; to bring men of common capacities so well acquainted with the *symptoms, nature, and origin* of their disorders, that they may not be in danger of using improper medicines and unsafe methods of cure; and to direct them to the administration of simple, easy, and cheap ones; is attempted in the following work: and if long experience and attentive study, if practising on liberal principles, and repeated and candid trials of the doctrines, opinions, and prescriptions, of the most eminent writers, can entitle the Author to credit and confidence, he flatters himself the COMPLEAT FAMILY PHYSICIAN will make it's way in the world with such a degree of reputation, as to repay his toils and labours with the highest gratification he is capable of receiving.

Nor will the Author confine himself to the prescriptions of the college. *Quacks* and *empirics* appear in many instances to have acquired well-deserved reputations; nostrums have of late years made their appearances, which their determined votaries have reported to be infallible. Some of them have undoubtedly been administered with astonishing success; and, in many instances, have put to flight diseases which had baffled every species of regular attack. Of these medicines, their operations and effects, the best accounts that can be procured will be given in the course of this work, without prejudice or partiality: for though it may be necessary to be on our guard against the vast variety of specifics, which are daily offered to our use, in the pompous advertisements of the public prints, rivalling in numbers the catalogue of medicines in the apothecaries shops of the last century; yet it would be a strange kind of infidelity, to disallow the well-authenticated cures attributed to *Dr. James's Fever Powders, Dr. Ward's Pill and Drop, the Ormskirk Powders for Canine Madnefs,* and several other medicines of the same class; the salutary effects

effects of which have in many instances been established, on the testimonies of the first characters of the present age.

The properties and effects of the several *Medicinal Springs* and *Baths* throughout this kingdom, as well as those of other countries, whose waters are usually imported into Great Britain, though almost wholly devoted to the relief of the affluent, will be attentively and copiously discussed. The author of this work means not to confine it's usefulness to any order or condition of men; he trusts all ranks, from the highest to the lowest, will find in it such plain and comprehensive directions, as may prove equally salutary to the nobleman in his palace, and the peasant in his cottage: nor does he apprehend he shall incur the imputation of vanity, when he expresses such a hope, because he wishes it may be fully understood, that he has relied much less on his own practice and experience, than on the authorities of those great and respectable physicians, from whose works (though the author has thought it unnecessary to insert their names) many of the most valuable prescriptions, both as to *regimen* and *medicine*, have been faithfully and carefully extracted.

In the annexed *Lists of Medicines*, and *Medicinal Preparations*, no others will be found than such as are referred to or prescribed under the various heads of diseases: the exercise of reason, and the application of experience, have in this enlightened age reduced the *materials of physick* to a very narrow compass; and it is somewhat remarkable, that the principal ingredients in the modern composition of medicine, such as *mercury* and *antimony*, in their various forms, were rejected by the ancients, under an idea of their being destructive of that health, of which they are now found to be the sovereign preservers and restorers.

The Author has added to his *Lists of Medicines* the *prices* at APOTHECARIES HALL, because it is well known, that in the regulation of that approved dispensatory, the visitation and inspection of the best physicians in the world, banish every apprehension of sophistication or adulteration, and that from the liberality and public spirit with which that admirable plan is conducted, every article is vended at the lowest rate, consistent with a due attention to unrivalled excellence.

Of the distillation of *simple waters*, and the composition of such family medicines as claim no acquaintance with the apothecary's shop, little need be said; almost every house produces some notable female, who, with due regard to the plain directions contained in this work, will execute her office with satisfaction to herself, and advantage to the convalescent.

Where

Where the Author has recommended *alteratives* in the form of *diet drinks*, *decoctions*, or other preparations of the like kind, prescriptions are subjoined; and proper care is taken that no information may be wanting, either as to the frequency or quantity in which they are to be administered.

If the Author should appear to have devoted more particular attention to *regimen*, than is usual in Medical Treatises, he begs leave to account for it by observing, that it has ever been his opinion, and it has been confirmed by his practical experience, that a skilful and well-informed *nurse*, is as essential to the re-establishment of health, as a learned and disinterested *physician*; but as the former generally acts with much less authority than the latter, he has endeavoured to persuade the patient to become his own nurse, to regulate his own conduct in the several concomitant articles of air, exercise, and diet, and to convince him, that without a strict conformity to rules in these particulars, the efforts of medicine will be in vain, and the best devised means of art be counteracted by intemperance, irregularity, or excess.

Few cases in Surgery fall within the reach of theory; the judgment of the anatomist, and the hand of the skilful operator, are required in most exterior accidents which affect the human frame; yet where from the slightness of the occasion, professional assistance may possibly be dispensed with, or where the exigency of the circumstance calls for instant help, such general ideas are thrown out, and such simple and ready applications suggested, as may in many instances prove of themselves effectual, and in others supply the want of immediate chirurgical attendance.

Nor will the Author, he presumes, be censured for descending too low, when he enumerates and provides cures for those *lesser evils*, which, though they are usually committed to the care of practitioners much inferior to the regular professors of physic, are yet of consequence enough to destroy the comfort and obstruct the happiness of the sufferer; and not unfrequently, by long continuance, and total disregard, induce a habit of sickliness, and imperceptibly sap and undermine the best constitution. For such complaints, familiar remedies are pointed out, and little rules laid down; attending to which, those petty invaders of ease, elegance, and health, may be effectually prevented or dismissed.

Particular disorders, and those incident to criterion of time or sex, subjects indispensibly introduced in so general a work, the author has treated of with the greatest degree of delicacy, which a due regard to the safety of those for whom he writes would possibly admit; yet he entertains the most sanguine hope, that this part of his work will prove essentially serviceable, as he has endeavoured

endeavoured to steer a middle course, between the tardy and over-cautious process of what is called the regular practice, and the violent and too often dangerous operations of empirical pretenders.

An *Herbal* is added to this work, from the best English botanic writers; an addition extremely interesting, as it is absolutely necessary that the reader should be compleatly informed of the descriptions, virtues, and effects of the several plants which are included in his System of Medicine; and as it may prove highly entertaining to those who are prevented by more active engagements from profiting by the voluminous and numerous publications on this pleasing and popular subject.

The Author is aware, that when he earnestly recommends this work to the attention of every individual, he shall be told (for such are the common, it may perhaps be said the vulgar prejudices) *that medical knowledge in men not designed for practitioners, is a dangerous acquisition, that it is apt to impress them with fears, apprehensions, and fancied indispositions; and that as few are disposed to drink deep of this cup of science, they will be ready to form superficial opinions, and try experiments upon themselves, from hasty and ill-grounded judgments.* To subdue prejudices of so fatal a tendency, is one of the inducements to this publication; and if after it has been attentively and candidly perused, a trace of them remains, the Author will then acknowledge himself to have laboured in vain for the universal benefit of mankind.

To dispel the clouds that have too long overshadowed this divine art; to render the practice of physic as obvious and easy, as it is useful and necessary; to communicate blessings, the concealment of which is little less than criminal; to direct the affluent and the indigent, the learned and the illiterate, in the road to health; to conduct them through the journey of life with as little pain, and as much satisfaction, as the complex mechanism of the human fabric, ever subject to disorder and infirmity, will permit; and to remind mankind of their high obligations to the great Author of their existence, who in his judgments for their transgressions has remembered mercy, and condescended to afford balm to pour into their wounds; have been the principal objects of the Author in the following sheets: which he submits to the public, in full consciousness of the rectitude of his intentions, and with the moral certainty, that with a reasonable degree of attention, they *must* be extremely beneficial, and can by no possible means prove injurious to a single individual.

The Author looks forward with the highest pleasure, to the happy effects of this publication, through the many humane and benevolent characters among the *country gentlemen, and resident clergy*, in the different, and more especially

cially in the remote provinces of these kingdoms; in such hands, this little medical library will prove an invaluable treasure: strongly inclined to administer to every species of distress, how will the commiserating heart rejoice at the ready means of offering, not only relief from the horrors of want, but from the pangs of disease! and how delightful the reflection of having restored to an affectionate husband the wife of his bosom, to the numerous family a tender mother, to the aged parent a dutiful child, and to the community a worthy and valuable member!

Nor will the *softer sex* be excluded from a participation in these heart-felt scenes of pleasure: in a plain and familiar dress, medicine now courts their attention; the sacred cabinet of physical knowledge is at length opened, and the barbarous policy of confining it's exercise within the pale of dead and learned languages is now at an end. Nor does the Author mean to flatter, or to risque an improbable conjecture, when he expresses his expectations, that his fair countrywomen may shortly attain to the same excellence in the healing arts, which they already exhibit in the various sciences which have been hitherto the subjects of their study; and that, to the blessings already derived from these *last, best works of God*, we may add the preservation and restoration of health.

To render this work universal and extensive, not a single *term of art* has been retained for which a suitable expression could be found in the English language; in the few instances where that difficulty has occurred, an immediate explanation is given; and to avoid the possibility of error and mistake, the *quantities* are expressed in words at length; the Author has himself corrected the press, and every caution has been exercised to prevent any species of misapplication.

The life of man is marked in distinct periods, and the diseases most commonly incident to each period are treated of under that particular head; for this purpose, and for the ease and convenience of the reader, the whole is divided into books, and those subdivided into chapters, and the contents prefixed to each particular book and chapter, so that the patient or his friend may without difficulty or confusion turn at once to the disorder, treatment, and cure.

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T H E

Compleat Family Physician;

O R,

UNIVERSAL MEDICAL REPOSITORY.

B O O K I.

Of the Diseases of Infants, Youth, and Unadults; and in particular of epidemic eruptive Diseases, such as Small-Pox, Measles, Chicken-Pox, Swines-Pox, &c. and of Inoculation.

C H A P. I.

Of the Management and Treatment of Infants from the Birth.

PERHAPS it is the wisdom of the Divine dispensation, that the human offspring should enter the world in a more helpless condition than any other animal. The brute creation, under the guidance of instinct, a kind of substitute for reason, either abandon their young in the instant of their existence, or foster them with unremitting care and unerring management; but, exposed to the open air, and the inclemencies of the seasons, bountiful nature has provided them with necessary coverings and suitable food, and they are in much less danger from the attacks of disease, than the depredations of voracious invaders: as their wants are few, tenderness and attention are required to be but of short duration; they speedily ripen into ma-

turity, are enabled to supply their own necessities, and the ties of parental and filial affection are quickly dissolved, leaving no trace behind of the once intimate connection.

But to man, the image of God, endowed with the faculty of reason, and accountable for it's exercise, more important cares are allotted: conceived in sin, and brought forth in sorrow, the little stranger no sooner makes his appearance in this world of woe, than he is surrounded with dangers, and threatened with disease; maladies of a thousand kinds present themselves to awaken parental tenderness, and excite those warm affections, which are destined to continue, both as a natural impulse and duty, to the end of our lives.

The

The bills of mortality furnish us with melancholy proofs of the great care and attention necessary in the preservation of infants. In the metropolis, where air, exercise, and cleanliness, are in general wanting; where the father and mother (both probably employed in procuring the means of existence) are often confined, with a numerous family, in the narrow compass of a garret, or the loathsome limits of a cellar; it is not surprising that so large a proportion of their offspring should be consigned to an early and untimely grave. In the country, indeed, this evil, of such moral and political danger, is less predominant: where the parents are devoted to the labours of husbandry only, the children are in general healthy; but in manufacturing towns and villages, they partake for the most part of the same fate which attends the inhabitants of the metropolis.

Nor is the want of care more destructive to the human species in the infant state, than an immoderate and excessive exercise of it; ignorant nurses, and other assistants, too frequently and officiously introduce such a vast number of articles, wholly unnecessary, and often injurious, in the food, cloaths, and medicines of infants, that the loss of great numbers may be attributed to this ill-applied and over-busy zeal.

Another principal cause of the destruction of infants, is the want of that congenial nutrition, which nature has provided for their sustenance, and the substitution of foreign aliment, often unwholesome, and always unnatural.

It will not be denied that the infant partakes of the constitution of it's parents, and that as the mother has the largest share in it's formation, so it will be most apt to resemble her in habit of body; this being admitted, what can equal the absurdity of robbing it of the food, which must, of all others, be most adapted to it's support, and supplying it with the milk, habits, and disorders of a stranger! or what wretched influence can

prevail on a mother to abandon the care of her child to nurses and servants, and devote it to probable destruction; depriving herself of one of the most delightful offices that fall within her sphere, and idly bartering, for unsubstantial amusements, the solid satisfaction of cherishing, protecting, and forming, the bodies and minds of a healthy, beautiful, and grateful offspring!

Nor is the evil confined to the child thus torn from it's mother's breast: the infant who claims the sustenance, thus sold to the nursing, presents us another sufferer; robbed of nourishment and attendance, and generally attempted to be brought up by hand, it pines for a few months, and then dies in a state of emaciation, occasioned by actual want; or if it should have strength and constitution enough to struggle through it's infancy, attains the years without the conditions of manhood, and creeps through life, feeble, sickly, and unhappy. And thus, too often, from vanity and levity on the one hand, and a mercenary spirit on the other, is the community deprived of two useful members at once, or a miserable exchange made of beauty and health, for deformity and decrepitude.

It is, however, by no means just to suggest, that every mother is capable of suckling her own child, or that all mothers are alike capacitated for this necessary task; many cases offer in which it is impracticable, and others in which it would be imprudent, and equally dangerous to the mother and infant. Women who, from delicate habits or constitutions, are subject to nervous or hysteric complaints, are certainly unqualified to obey the calls of nature in the performance of a duty so tender, agreeable, and essential.

But the mere act of giving suck, is by no means to be considered as the only business of the mother; a variety of other circumstances demand her attention, and the future health, happiness, and comfort of her child, depend on her care and management

nagement in this early period of it's existence.

Nor is the father to be excused from his part in this amiable duty. Female educations are little calculated to form mothers, nurses, or mistresses of families; not one wife in a thousand, when she brings a child into the world, has the smallest idea of the charge committed to her hands; the husband is generally better informed, at least from reading, and it is neither beneath his dignity, or inconsistent with his province, to lend his assistance, in whatever concerns the corporeal or mental welfare of the being which he has contributed to produce.

To supply the child with wholesome, natural, and nourishing food, and with warm, comfortable, and seasonable cloathing; to give it such a degree of exercise as the tender frame requires; to watch the approach of disease, and apply such preventives as offer; to attend the progress of distemper, and administer the remedies that are prescribed; are offices of a nature so truly maternal, that the interference of any other hand should in very few cases be admitted.

In the very important article of cleanliness, the mother's eye is above all things necessary: nurses and servants are but too apt to relax in their regards to the salutary regulations of neatness and delicacy; yet we may venture to affirm, that many lives are lost by negligence in this particular, and that clean water, clean linen, and constant attention to the evacuations of infants, would prevent many diseases, and in general confirm and strengthen the most robust and best constructed constitutions.

The milk of the mother, and where, for the foregoing reasons, that cannot be applied, of a young, wholesome, and sober nurse, is the food apparently pointed out for an infant by Nature: she has in general provided and prepared a quantity proper for it's sustenance; and all endeavours to bring up children without the breast, are such absurd innovations on her dictates,

that it is by no means to be wondered at, that in such attempts not one in fifty succeeds; and that even where they seem to thrive for a few weeks, or months, breeding the teeth, the small-pox, and other diseases to which young children are peculiarly liable, in frequent instances prove fatal to them.

Children commonly shew a disposition to suck very shortly after their birth, and they should unquestionably be immediately indulged, if the mother's milk begins to flow into the breast; and should it be slow in it's progress, the natural industry of the infant will speedily supply the deficiency: the first milk it can draw is the best medicine in the world to cleanse it's little stomach and bowels of the matter acquired in the womb; and at the same time it contributes to the safety of the mother, by preventing milk-fevers, inflammations, and other complaints incident to women in child-bed.

But if the breast milk cannot be speedily obtained, a little oatmeal gruel, or thin pap, mixed with new milk in equal quantity, or rather water, with the addition of a little moist sugar only, without wine or spice; is the only food that can be given with safety, and without incurring the danger of heating the blood, and producing gripes, by over-charging the stomach.

Nor will the child need much other food of any kind, for the first three or four months, if the mother or nurse is in health, and has a sufficient quantity of milk. After that time, it should be accustomed to take somewhat easy of digestion, once or twice in a day: water pap is the most common, and I believe the most light and wholesome food; though some give the preference to oatmeal gruel, milk pottage, or weak broths with bread. As the child advances, the latter may possibly be best adapted to prepare for the change that will happen on weaning, as it is extremely necessary to guard against sudden transitions. To avoid which, the food, even before, and for some time after

it is weaned, ought to be wholly of a very simple nature, and either to consist principally of milk itself, or to have as nearly as possible the same properties.

As soon as the child shews a desire to chew, good, but not too new bread, may be given it in any reasonable quantity: the action of chewing will facilitate the cutting the teeth, and helps the discharge of the saliva, or spittle, which is of a very nourishing quality, and agrees perfectly with the mother's or nurse's milk: and if, instead of corals, or other hard substances with which the child is commonly supplied, as soon as it gives tokens of approaching teeth, by an inclination to chew whatever comes within it's reach, a crust of bread is put into it's hands; it will answer the double purpose of exercising the gums, and abating the heat and itching which accompanies the breeding of teeth, and at the same time will serve as a vehicle to convey into the stomach an excellent and medicinal aliment.

The quantity of food, though not of equal importance with the quality of it, is yet an object of great attention; by overloading their little stomachs, which is often effected by enticing them to eat of pap or gruel highly sweetened, they grow fat, heavy, and inactive; the appetites of infants require no sauces to quicken them, hunger only should direct their meals; nor can any practice be more absurd, than that of perpetually cramming them with food, which they are only induced to take by it's being made sweet and palatable. Even as the child advances, bread first boiled in water, and then given in new milk, light broths of veal or chicken with bread, and bread-puddings without the addition of sugar, will constitute a wholesome and nourishing diet. Custom has introduced an immoderate use of sugar, which is apt to produce heats and acidities; and if the child has never tasted it, it will feel no loss in the want of it. Nor should the mother's milk

be given in over-quantities, so as to induce it to discharge what it has swallowed by vomiting; a practice too common, from an excess of motherly tenderness.

But the same care is likewise necessary, that the infant should have sustenance enough; for this purpose it's appetite should be consulted, and great regard paid to it's cravings for food: for different subjects, different quantities are required; and it is as impossible to limit the proportion of food, as it is to ascertain the size of the body. As an over-quantity of food produces sluggishness, and a habit of unhealthy fullness; so a deficiency occasions watching, restlessness, crying, and irritation. Of the two extremes, pinching children in their food is certainly the most dangerous; nature will discharge an overloaded stomach, but cannot supply the calls of hunger, or the strength which must be derived from nourishment alone. The best rule that can be given, is to feed the child often, with moderate quantities; the contrary practice is destructive to the constitution, and should be carefully avoided. A certain degree of regularity, as to the times of giving food, is of great utility, as well as a strict regulation that no more be offered to an infant after it discovers any tokens of loathing.

Animal food should be given to children with a very sparing hand; they should not be suffered to taste it till they have teeth, nor should they be permitted to take it in any considerable quantity till after they are weaned. Flesh occasions heats, and produces inflammations, fevers, and other diseases, which usually affect gross habits; and a vegetable diet only, is apt to turn sour on the stomach: a due proportion of each, with the balance, however, in favour of the latter, is, without doubt, the most salutary regimen.

Over-fondness, and a desire that the child should participate in whatever the parents particularly esteem, too often introduces a pernicious

pernicious custom, of permitting it to partake of whatever comes to their table; by this means it is not only indulged in a very improper mixture of things actually hurtful in themselves, but it acquires a relish for high-seasoned meats, and rich sauces; which, at all times noxious, in the early stages of life certainly vitiate the blood, and lay the foundation for a thousand diseases. Strong broths and soups, made dishes, very fat meats, salted, smoked, and high-spiced provisions, should be totally banished from the bill of fare for children, and strong and fermented liquors of every kind should be avoided with the same strict attention. Light, plain, and simple food, in moderate quantities, preserving a proportion of solids and fluids, and clear, pure and unmixed water, will lay in such a stock of health and strength as will enable the infant to combat the various distempers to which it is liable; and such a regimen will disarm the small-pox, measles, whooping-cough, and other inflammatory disorders, of the terrors with which they are usually accompanied: but if some other drink must be given to them, let it be milk and water, whey, small-beer of a proper age and fineness, or a very small portion of wine mixed with their water; the latter however, is in most cases better omitted.

From the liberal use of butter, children should in general be restrained; it furnishes them with gross humours, and keeps the stomach in a constant state of relaxation: a disposition which should be carefully avoided, as it subjects them to swellings in the glands, rickety complaints, and even the king's evil. Honey, or a small quantity of preserved fruits, particularly raisins, may be substituted in it's place; the former is cleansing, and efficacious in the prevention of worms and those eruptive complaints to which children are subject.

Ripe fruits in moderate quantities, and of particular kinds, such as strawberries, raspberries, currants, and apples, far from be-

ing injurious to children, may in many cases produce very good effects: they serve to cool and correct hot and acrimonious humours, promote digestion, and keep the body from being costive; but great care should be taken that they are not indulged with them to excess; in that case they occasion gripes, wind, and surfeits.

But we would by no means insinuate that it is necessary to confine children to any constant course of food; if regard be had to the nature of their sustenance, it is of little consequence how often it is varied in form or substance: the appetite may pall by a continual repetition of the most admired dish, and a change may be as necessary as restrictive cautions against excess.

Various opinions prevail with respect to the age at which the child should be weaned; some recommend six months as the critical time, others prefer nine or twelve months, and many instances occur of very healthy families of children, who have been accustomed to suck from eighteen months even to two years. The best direction that can be given on this subject, is to consult the state of health of the mother and infant, paying particular regard to the time of cutting teeth; it is cruel, and in a great degree dangerous, to deprive an infant of the food it can attain with most ease, at the moment it is struggling under an operation painful in it's nature and frequently alarming in it's consequences.

Alike doubtful is the question with respect to the manner of weaning; many contend with earnestness, that the breast should be withdrawn by degrees, nor is the contrary conduct without advocates: but it is most probable that either method may be taken with safety, if the child is in perfect health, and due care be taken to keep it so, by administering small quantities of rhubarb and magnesia, for a few days after the child has been weaned.

The next material article in the management of infants, which falls under our con-

consideration, is cleanliness; a duty of such indispensable necessity, that from the neglect of it arise, we are persuaded, many of those diseases which carry off children in the first stages, and many of those which attend them, through the course of a life rendered miserable by a want of attention in the outset of it: it is astonishing, that a circumstance of such immense importance should be so little regarded; and that a principal ingredient in the composition of health and beauty, should be so frequently omitted, whilst the fond mother eagerly pursues less effectual means to obtain for her darling child these invaluable blessings!

The skins of some new-born children are covered with a kind of slimy matter, more or less glutinous in different subjects, for the removal of which various methods are offered; but Castile soap and warm water, or if it adheres very obstinately, the application of a little soft pomatum, will effectually answer the purpose; nor is it of any consequence that it be all got off before the child is dressed, as what remains on the skin will in a few hours harden to a kind of dry scurf, which a linen cloth will rub off with ease: all other applications on this account are wholly improper and unnecessary.

From the birth, the child should be accustomed to a daily washing, from head to foot, in cold water; this may be done from a basin, without immersion, care being taken not to omit any part of the body, and to wipe it very dry with a soft linen cloth: by the constant use of this species of cold bath, all disagreeable smells will be taken off; galls, excoriation or stripping of the skin, and many diseases which appear on the surface of the body, will be prevented, and the child will acquire strength enough to resist the attacks of colds, and such disorders as are in general produced by the inclemencies of the air, or the changes of the seasons; for in the habit of acquiring such disorders in early infancy,

originate frequently rheumatisms, sciaticas, and other chronic complaints, which are usually attributed to very different causes, but are for the most part owing to want of proper management in this first period of our lives.

The next object of the mother's care, should be a frequent change of cloaths: the perspiration of children being more copious than that of grown persons, a greater degree of attention is necessary in this respect; foul cloaths, already saturated with the infant's juices, refuse to admit more; the sweat dries on the skin, stops the pores, and obstructs a necessary discharge; and the cloaths themselves become foetid, hard, and uncomfortable, fret the skin, and bring on not only frowardness and fever, but actually occasion diseases of the skin, and encourage the generation of vermin. In the extremest state of poverty, a certain degree of cleanliness is attainable, and whilst water is to be had without expence, no excuse remains for dirt and filthiness.

But above all things, the evacuations of an infant should be attended to; nor, if possible to be avoided, should they remain unchanged a single minute; rickets, weakness, and swelled joints, are the certain effects of inattention in this momentous article, and the least dangerous consequences are galling, fretfulness, and a certain degree of feverish heat, the symptoms and harbingers of worse complaints.

Combing the heads of infants should by no means be neglected; they are apt to acquire a kind of scurf beneath the hair, which stops the pores, and is productive of head-ach and weak eyes; to which, from the mere omission of this useful operation, most young children are subject: but a fine comb and very tender hand are required in the performance of this task.

For the cloaths of infants few general directions can be given, except as to quantity: great care should be taken that they are not kept too warm; the heat of a child-bed

bed room, the additional warmth of the mother's bed when the child is applied to the breast, and the fever, which from violent agitation, affects more or less every child after the birth, make such a caution absolutely necessary; and if the child is intended to be sent out of the house to nurse, a regulation in this respect is the more indispensable, as it is ten to one but in it's new habitation it is exposed to a degree of cold which it would not have endured at home even in a state of absolute nakedness.

An excessive quantity of cloaths is on all accounts to be avoided; but a still greater degree of danger attends the common manner of putting them on, and on this subject some particular directions are requisite.

For many centuries, the whole apparel of infants was included in the general denomination of swaddling, (a corruption of swathing-cloaths;) and they were so called, because the bodies and heads of the wretched little patients were encircled in repeated and redoubled applications of rollers, bandages, and binders.

No sooner was the poor little animal born, than it was abandoned to the cruelty of midwives and nurses, the handmaids of female vanity, and doomed by these merciless operators, to a species of torment, sufficiently severe at the moment of infliction, but productive of the most alarming consequences in future; swathed, swaddled, plaited, folded and pinned, it was reduced to the form and almost condition of an Egyptian mummy, and exhibited to the visitors as a spectacle of finery, and a proof of the superlative skill of the attendants; it's tender cries and impatience at it's fetters, exciting no compassion, or procuring the least hope of emancipation.

No methods, short of actual blood-shedding or violence, could be so effectual to accomplish the destruction of the unhappy victim, or to constitute a certain provision for the misery of it's future life.

Strictures and ligatures, on the tender frame of an infant, were originally introduced from an ignorant and mistaken idea, that they would operate as preventives against corporeal deformity; a fatal misapprehension, yet an error of so palpable a nature as to be corrected by common experience, and the slightest intervention of human reason.

Examine the brute creation—unencumbered with cloaths, unrestrained by bandages, and ornamented only by the hand of nature—and you will find no instances of deformity, but such as are occasioned by exterior accident, either to the parent mother or the infant young. Carry your enquiries farther, and among uncivilized nations such instances are equally rare. Is any other proof necessary to support an assertion, that deformity is promoted, in a very high degree, by the very endeavours which are used to prevent it; or that nature is much less concerned in the distortions of the human body, than the various efforts of art, practised on the pliant and yielding forms of infant sufferers?

In the womb, nature has provided against possible pressure, by surrounding the child on every side with fluids, protecting it from external injury, and leaving it's motions free and unconfined; yet no sooner did it escape from this indulgent prison, than it was cramped in strait cloathing, and condemned to be forced into postures equally unnatural and injurious.

The body of an infant consists of an infinite number of tubes, filled with fluids in perpetual motion, and it's bones are so tender and flexible to facilitate the purposes of growth, that they are affected by the slightest restrictions: when the cloathing is troublesome or uneasy, the child shrinks naturally from the offended part, and having acquired a habit of doing so, fixes in some unnatural shape which it must retain for life. Natural weakness or disease may in certain cases occasion deformity; but very far the greater part of the instances

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which

which occur, are produced by mismanagement in cloathing.

Nor is the exterior form alone sacrificed to this absurd custom of bracing up the infant body; the constitution suffers equal injury. Respiration, the circulation of the blood, the operations of the lungs, all the various motions which take place at the birth, are obstructed and impeded in their first efforts; and it is an observation, the truth of which daily experience justifies, that deformity of body is seldom accompanied by health or vigour.

All the cloaths necessary for an infant are, a light cap on it's head, a little linen shirt next it's body, a thin flannel garment without plaits or folds, and a loose gown; all these should be fastened with strings instead of pins, a species of offensive weapons too often applied to the child's body as well as it's cloaths, and if a cloth to receive the evacuations be added, the child will be compleatly dressed for all the purposes of necessary warmth and comfort: whatever else is admitted, can only be for the gratification of pride, or the compliance with wretched customs, which are already in many parts of the kingdom justly exploded as highly injurious to the little objects of our care; an opinion which, for the preservation of the human race, we earnestly hope will very speedily become general.

How many of our fair countrywomen have at this moment reason to deplore the pernicious, and once universally prevalent practice, of confining growing girls in strait stays, a practice productive of all the evils we have just enumerated; but which seems now to be happily losing ground, from the operations of sense, and the conviction of woeful experience, that unequal shoulders, flat breasts, and crooked backs, are the natural consequences of stiffened garments and tight lacing.

If the mother is really incapacitated from suckling her child, great care should be taken in the choice of a nurse. A

healthy infant at her breast is in general a very good direction: yet this is not always to be depended on; a naturally strong and healthy constitution, derived possibly from the father, and the air of the country, will frequently throw a bloom over the countenance of the child, for which it is not indebted to the mother.

The usual description of good milk is, that it be rather thin than gross, of a colour inclinable to blue, and that it be sweet and perfectly free from any pungent or saline taste on the tongue.

To sound health, a good constitution, and a body perfectly free from every kind of eruption, and a breast well stored with good milk, should be added care, cleanliness, and a great share of good-nature. General fondness for children is rather an equivocal proof of a good nurse; what degree of affection can we suppose any woman will bear to the child of another, who, for the sake of gain, can bring herself to abandon her own offspring, or to commit a robbery on both, by dividing between them the nourishment allotted by Providence to sustain the fruit of her own womb only: if this circumstance was duly considered, it might probably go no inconsiderable way towards the abolition of a custom, founded principally on idleness, and practised even to inhumanity.

If the child is nursed at home, and the mother pays any degree of attention to it, she will keep a strict watch over the conduct of her nurse, and by that means discover her vices, habits, and bad customs; of the former, drunkenness is the most common, because it may in general be indulged without much risque of discovery. Mothers are very apt to permit the use of large quantities of ale, and other fermented liquors, from an apprehension that it increases and enriches the milk; the contrary of which is undoubtedly true. Large draughts of inflammatory drink, serve to lessen the quantity, and destroy it's purity; spirituous

spirituous liquors of any kind have still worse effects. Fine table-beer, of a proper age, and light broths and gruels, are the most wholesome fluids that a nurse can swallow, and will best answer the purpose of preparing sweet and innocent food for the child. Her food should as nearly as possible be such as she has been accustomed to, nor should she omit to take her usual exercise. Inattention to these rules, will prove truly injurious to the infant.

It is by no means unusual with nurses, if the child is restless, or disinclined to sleep, to quiet it with stupifying drugs, to save themselves the trouble of attending it: these are all of the most pernicious and fatal consequence; as well as strong liquors, another species of poison, too often administered for the same purpose, the operation of which, though somewhat more slow, is equally sure to deprive the unhappy infant of the benefit of a good constitution, if not of life.

Parents should lay the strictest injunctions on nurses, never to practise on the healths of their children, or to conceal any accident they may meet with, or any disorder that may attack them, in consequence of negligence or want of care: the attempts of such extremely ignorant persons to administer medicine, may be, in many cases, of fatal tendency; and the concealment of accident or disease, often prevents proper application, till it is too late; and cases which, if taken in time, might be easily subdued, are suffered to run on till they become incurable, and end but with the patient's life.

The administration of medicine, without consulting the parents, should be absolutely prohibited; nine times in ten it is given improperly, the efforts of nature frequently throw out in eruptions on the skin such bad humours as threaten infants with fevers, and other violent diseases. Nurses are too apt to treat such eruptions as infectious disorders, and use means to repel

them. Attempts of this kind, which go in direct opposition to nature, are always dangerous, and very often fatal. No eruption should ever be hastily stopped, nor even checked, till the nature of it be fully ascertained.

Hired nurses, who are actuated by no affection towards the tender beings committed to their charge, are, in general, insensible to their cries; and the poor little wretches are frequently permitted to exhaust their spirits in fruitless wailing, without the smallest endeavour to lull them to quiet, or soothe their anguish; though not unfrequently occasioned by pins, wetness, or some other act of the nurse's carelessness. By this unfeeling inattention, they are suffered to strain their little bodies; though inflammations of the lungs, sore throats, nay, even ruptures, are the almost certain consequences.

The trouble occasioned to nurses by frequent stools, is commonly avoided by giving the infant astringent medicines; a most horrid practice, as this is the channel by which nature in general works, to cleanse the infant body from impurities, and to counteract her operations, is to add one disorder more to those she means to relieve. If the looseness is violent, it most probably proceeds from acidities, which a small quantity of rhubarb, and magnesia alba, or a gentle vomit, will in most cases infallibly correct; at least, astringents should never be permitted, till the others have been first used as preparatives.

But one of the principal faults of mercenary nurses, is their denying to the children entrusted to their care, *air and exercise*.

In great and populous cities, and in large manufacturing towns, where the inhabitants are crowded together, in narrow confined streets, and low, dark, and dirty houses, it is no wonder that the children should be sickly, and that a very few, comparatively, should arrive at maturity.

Grown

Grown persons, however hardy and robust, are generally affected by such situations; but their children seldom struggle through infancy, or if they do, are commonly marked by deformity or weakness. The like fate, and for the same reasons, generally attends the unfortunate infants who are consigned to hospitals, work-houses, and other public and charitable institutions: this is a misfortune inseparable from poverty; but it is the duty of such parents as can well afford the expence, to place their children in a dry, healthy, and airy habitation; and to enforce, by the strongest injunctions, and frequent visits, the carrying them out in the open air, many times in the day. Nurses left to themselves, are too apt to indulge a habit of indolence in this essential article.

Small apartments are totally unfit for nurseries, nor should several beds be suffered in one room; children are relaxed by the heat, and rendered delicate and liable to colds; added to which, the air of confined or crowded rooms is unwholesome in itself, and disposes them more readily to receive the infection of contagious diseases. Nor is the practice less dangerous, of covering up the infant closely in the cradle, depriving it of the comfort of breathing, and compelling it to swallow again, in repeated draughts of respiration, the same air it has emitted. If small beds could be provided for children, as soon as they are weaned, with bed-cloaths separate from those of the parent or nurse, it might produce very happy effects.

If children are laid to sleep with all their cloaths on; great care should be taken not to expose them to the open air immediately on their being taken out of the cradle; the safer way is to undress them in a great measure, before they are put to rest, and to restore their cloaths as soon as they awake: no custom can be more absurd, than that of heaping additional cloathing on them in the cradle, where they have naturally sufficient

perspiration, to induce an extraordinary degree of it, which is violently checked the moment they awake, to the extreme hazard of their lives.

Nor should children, as they grow up, be confined to warm rooms, or kept wholly within doors; at a certain age they are sent to public schools, and other places of education, where the treatment is so different, that, like exotics, they shrink at the exposure, and never attain any considerable degree of vigour or strength. And the like inconvenience arises from bringing children, who have been accustomed to wholesome country air, to schools in confined towns, where their improvement in learning is frequently impeded by the loss of health, at a time, too, when the application of every hour is of inestimable value.

To prolong and render comfortable the life of man, *exercise* is indispensibly necessary; the health, growth, nay, even the very existence of the infant, depend on it.

The nature of the exercise ought to be adapted to the age of the child, and to be increased by degrees, as it gains strength of body; but it must, in many cases, be regulated by the condition of the parents. Rocking in the cradle has been the practice of centuries, and moderately used may not be an improper kind of exercise; but the mother's or nurse's arms is the most easy and natural; being carried from place to place, a variety of objects offer, which amuse it's fancy, and, under the information which it receives from it's conductor, direct it's opening ideas. Where actual poverty prevents this kind of exercise, frequent rubbing of the back and loins with a warm hand, will be of singular use. Even a swing, not high enough to suspend the infant, is preferable to the usual method of committing one child to the care of another; but both should in every possible case be avoided: and if mothers would dedicate more of their time to their children, at this period of their lives, they would be repaid by the forward growth

growth and strength of their offspring, who would be much more quickly in a capacity to take care of themselves.

If the nature of our undertaking permitted us to consider the structure and œconomy of the human body, no other arguments would be required to enforce the necessity of exercise; and when we reflect that the circulation of the blood, and all the animal functions, depend on it, no doubt will remain of the dangers which attend it's neglect.

It is a common, but very mistaken notion, that children acquire crooked legs and rickety habits, from being indulged too early in the use of their feet; but as exercise contributes to the strength of the limbs, these infirmities are much more probably derived from their being kept too long in a sitting or lying posture: if their limbs are weak, the weight of their bodies is proportionable, and the moment they have skill to keep themselves erect, they may very safely be suffered to use their legs. Leading-strings ought never to be permitted; children who are accustomed to them are apt to depend entirely on this support, by which means their whole weight is thrown forward, and the lungs, stomach, and bowels, suffer an unnatural and dangerous compression. Sedentary employments of any kind, whether of study or labour, are extremely prejudicial in childhood and early youth: when the calls to either are not to be dispensed with, it will be of great importance to divide the hours of application and recess, in such a manner as to give frequent opportunities for exercise, which should always be taken in the open air if possible. And these precautions are more particularly necessary for female children, who will feel the want of early air and exercise, not only at a certain critical period of life, but in the still more dangerous circumstance of child-bearing; an event attended with a degree of hazard to all, but most to those whose parents or friends have

neglected to improve their stock of health and vigour in the precious moments of which we now speak.

Having laid down a few necessary and fundamental rules, for the management of infants in health, we shall now proceed to treat of their *diseases*; but as there are certain accidental circumstances which sometimes affect children at the birth, and which yet are not to be classed under that head, we will first enumerate those, and offer directions and remedies suited to each particular case.

On the examination and inspection of a new-born infant, enquiry is generally made if it be tongue-tied; this sometimes, though very rarely, happens. A thin skin or membrane under, and extending towards the narrow part of the tongue, prevents the child from sucking, and may be remedied by a very gentle snip with a pair of fine scissors: but this circumstance so seldom occurs, that when the child exhibits an inability to suck, the impediment will much more commonly be found in over-full breasts or sore nipples of the mother, or in swelling of the glands, or weak jaws, in the infant. The operation of cutting should therefore never be performed without attending to these other possible grounds of the complaint.

It is said, that there have been instances of children born with their tongues inverted or turned, or that the same accident has happened from sucking: tickling the child's throat, to excite vomiting, has been recommended in this case, as the only means to prevent immediate suffocation.

The breasts of infants are generally found to contain a small quantity of milky fluid, but this should by no means be drawn or pressed out; warm milk and water, or a little sweet oil warmed and gently rubbed in, will in most cases remove it; or if it should remain beyond a day or two, a poultice of bread and milk is an effectual remedy. A small plaister of diachylon

is in some instances prescribed, when the breast grows hard; but the nurse should be absolutely restrained from using her finger and thumb, a practice both cruel and dangerous.

If too much of the chord, or navel-string, is left to the body of the child, it is apt to occasion inflammation; nay, in some cases, even mortification. The best way of managing it is, to make a hole in a piece of fine linen, many times doubled, and passing the end of the navel-string through the hole, to fold the cloth several times, till it gets near the belly; to which it should be bound by a smooth roller, but not drawn too strait. The navel-string commonly separates, and falls off, in four or five days; when that happens, which should be carefully attended to, a bit of singed rag may be laid over the navel; and if any rawness or soreness should appear round it, or the skin should be fretted or galled, a raisin split and stoned may be applied, and the part washed with a little allum-water, or a weak solution of sugar of lead, and a plaster of cerate applied, to protect it from rubbing.

When the navel appears to protrude, or push out, it is frequently mistaken for a rupture; but, as the latter is by no means a common case, all violent attempts to reduce it should be carefully avoided: nor should they be made, but with infinite caution, in infant subjects, even in cases of actual ruptures in the groin. The body may be kept open, and the hand gently applied to the part, when the child makes any extraordinary exertion, either by crying or otherwise. And, as this complaint is not of a dangerous nature, a cure will generally be effected without the application of bandages or trusses, which ought always to be used by very skilful hands.

If the retention of the infant's urine should afford any reason to suspect that the passage from the bladder is obstructed by a slimy matter, which sometimes opposes the passage of the water, a warm bath of milk and

water, or a little oil gently rubbed on the belly, will in most cases remove the complaint; but, if these applications prove ineffectual, it will be necessary to consult some person of judgment, as it may then be apprehended that the difficulty arises rather from some defect than from accident; especially in female infants, where the cause is not always to be found in the passage from the bladder, but in a kind of thin skin which closes it's orifice or mouth; and the same appearance sometimes presents itself at the gut, and prevents, in like manner, evacuation by stool: it is very proper, therefore, that the infant's body should be repeatedly and carefully examined, and that attention be paid to the regularity and freedom of it's evacuations.

The noses of infants are sometimes stopped up by gross matter, which, gathering in the nostrils, occasions difficulty in sucking, and even obstructs their breathing: a little oil or butter applied to the nose by a warm finger, will scarce ever fail to remove this complaint; but should it refuse to yield to these common and gentle prescriptions, two grains of white vitriol may be dissolved in about half an ounce of marjoram-water, and applied to the nostrils with a fine rag.

Running ears, sore or weak eyes, and excoriations, galls, or stripping of the skin, may, in general, be attributed to the same causes; the former and latter are almost constantly the effects of want of care and cleanliness, and may be removed by a careful attention to these essential articles. In the former case, a little cerate plaster may be applied; or, if extremely obstinate, a very weak solution of sugar of lead may be used to wash the part: in the latter case, the arm-pits, groin, or other galled parts, may be powdered with fine tummy, or even common hair-powder; but the most effectual remedy is fullers-earth dissolved in warm water, and when made quite soft and smooth applied with the finger.

Sore

Sore eyes are in general occasioned by the neglect of washing the infant's head with water from it's birth. Where that method is practised, this complaint seldom occurs, though it may sometimes happen, by exposing it soon after the birth to a very

strong light, or placing it too near the fire. In both cases, the most simple applications are the safest; and frequent washing with milk and water, or rose-water, will in general remove all the disagreeable effects of this disorder.

CHAP. II.

Of the Diseases of Infants.

THE *meconium*, which is so little considered as a disease, that it has not yet acquired any English name, is the excrement contained in the stomach and guts of a new-born infant; and which was formerly thought to possess very dangerous qualities, and to require the immediate assistance of purgatives to carry it off: but the mother's milk has been long considered as the most efficacious medicine, and scarce ever fails to promote the discharge of it. If the mother does not suckle, or the breast is not ready to receive it, a little magnesia, or even moist sugar dissolved in warm water, will answer the purpose.

The *red-gum* requires little more attention than to keep the body open; which may be done by small doses of rhubarb powdered and magnesia, mixed in warm water. The *yellow gum*, which is indeed a species of jaundice, is attended with some degree of danger; but the same medicine may be administered: and in many cases a change of milk is required.

The symptoms of *acidities* in the stomach of an infant, are at first loathings and sour belchings, a pale complexion, with frequently a yellow or green cast, wind, red specks or spots in the forehead, cheeks, or neck, a thick breath attended with a snoring noise, and not uncommonly a sharp and troublesome cough. Gripings, purgings, and green and sour-smelling stools, are

the sure signs of acidities in the bowels. In both cases, the best medicine known is magnesia, which may be given either in it's common food, or in the following prepared mixture.

Six grains of powdered rhubarb—thirty grains of magnesia—simple mint-water, half an ounce—syrup of sugar (or sugar dissolved in as much boiling water as will reduce it to the consistence of syrup) half an ounce—common water, an ounce.

Somewhat more than the quantity of a tea-spoonful may be administered every three or four hours.

But, as this medicine is evidently calculated to act as a purgative, as well as to correct the acids in the stomach and bowels, in case the body should be already sufficiently open, a like quantity of prepared powder of crabs eyes may be substituted for the magnesia; though the latter may, in most occasions, be used with safety and success.

If the same complaints occur after the child is weaned, an infusion of about fifteen grains of powdered rhubarb, and one grain of salt of tartar, in any simple water, poured carefully off after it has stood near the fire a few hours, may be given in the quantity of two small tea-spoonfuls at a time, and repeated twice or thrice in the twenty-four hours: you may add sugar, to make it palatable.

If

If the gripes are severe, and the mixture above recommended has not procured stools, a small quantity of peppermint-water, diluted with common water warm, may be given, and a flannel dipped in brandy or other spirit applied to the belly; and a glister of a table-spoonful of Florence oil, the like quantity of coarsest sugar, and from two to four ounces of new milk, or the decoction of linseed, should be immediately administered. Proper care must be taken that the heat of the injection do not much exceed that of milk from the cow.

For vomitings occasioned also by acridities, no medicine is more effectual than the magnesia and rhubarb mixture; but if the continuance of the complaint has so weakened the stomach, that it can neither retain food or medicine without loathings or actual vomitings, from two to five grains of ipecacuanha, according to the age of the infant, may be very successfully given; it should be finely powdered, and mixed with sugar and water, or the common syrup, and it's operation is mild and safe.

If the vomiting is apprehended to proceed from an irritation of the nerves of the stomach, a drop or two of liquid laudanum may be given in a table-spoonful of the saline draught, which may be composed of

Thirty grains of salt of wormwood or tartar, dissolved in half an ounce of fresh lemon-juice—half an ounce of common syrup of sugar—one ounce of simple peppermint-water—and one ounce of common water.

And the like quantity may be repeated every two, four, or six hours, according to the violence of the disease, lessening, however, the quantity of the laudanum in the repetition.

If the disorder is obstinate, the following plaster, from the size of a crown-piece in proportion to the age of the patient, spread on soft leather and applied to the

pit of the stomach, may be used with great probability of success.

Take gum labdanum, or plaster of the gums, of either three ounces—camphorated oil half an ounce—black pepper, or Indian pepper, three drams—essential oil of mint or mace, two scruples.

Melt the ingredients in a small earthen pipkin or pot, stirring in the powdered pepper as it dissolves, and adding the oil of mint or mace in the last stirring.

When the symptoms abate, it may be proper to strengthen the stomach by the following medicine,

Infuse one dram of Peruvian bark—six grains of rhubarb—and a small quantity of orange peel—in one ounce of simple cinnamon water, and one ounce of common water.

And after it has stood three hours, strain it carefully off, and give the quantity of a tea-spoonful morning and evening.

But, after all, vomiting may be occasioned by the quantity or quality of the infant's food. The matter thrown up will in a great measure ascertain the former cause, and the cure is too obvious to need pointing out: in the latter, a change is necessary even of the breast milk, if that should be found too gross or heavy; at least, the mother or nurse should have recourse to a more spare diet, and diluted liquors, in order to render her milk less thick and glutinous.

The symptoms which indicate the approach of the *thrush*, are lowness and depression of spirits, extreme weak pulse, difficulty, or almost suppression of breathing, and universal languor; as the spots rise on the surface, the pulse gets more strong and quick; a fever ensues, attended with want of rest, and general uneasiness; the extreme soreness of the infant's mouth prevents it's sucking; and blood and even convulsion-fits frequently follow it's attempts.

The disease itself appears in the form of small

small white ulcers, like sprinkling drops of any milky matter, spreading externally over the whole mouth and it's contents, the lips, jaws, cheeks, tongue, palate, gullet, and according to the opinion of many eminent physicians extending through the stomach and intestines, even to the excrementary passage at the fundament, where they may sometimes be traced.

These ulcers are fewer or more in number, according to the degree of malignity with which the infant is affected; in the first stages of the disease, they are thinly scattered over the distempered parts, are of a pale colour, and a clear appearance, and yield to the slightest touch: this state of it, as it neither prevents the child from taking it's food, nor interrupts the functions of nature, is attended with little danger; but if it is suffered to gain ground till the ulcers are so thick that they run together, and assume a yellow, brown, or dark colour, the infant will be unable to suck, and the little food it can convey into it's stomach will be prevented from mingling with the blood, and afford it no nourishment. Such part of the skin as is discoverable between the ulcers, generally appears in an inflammatory state; if it assumes a livid colour, it is a symptom that generally denotes fatal consequences; vomitings, belchings, and purging with sour stools, are also indications of a very disagreeable nature.

When these ulcers form a crust, it will frequently fall off and be succeeded by a second eruption; this also is a very unpromising symptom, and particular caution should be had not to attempt rubbing off the crust; for as often as that is done new spots will appear, which are rooted still deeper at every return, and contribute to affect the part more sensibly, and weaken the patient.

As this disorder proceeds also from acid humours, they should be immediately corrected: for this purpose, the magnesia and rhubarb mixture may be freely given, sweet-

ened with honey of roses instead of simple syrup; but if this medicine should occasion stools more frequently than three or four times in twenty-four hours, it may be proper to use the powder of prepared crabs eyes instead of magnesia, and to admit a drop or two of laudanum.

By way of gargle or wash for the infant's mouth, five grains of white vitriol dissolved in four ounces of bran tea may be used, or a slight decoction of the bark, with the addition of a drop or two of spirit of vitriol, or even port wine or claret diluted with warm water; but either of these washes should be passed into the mouth by very small quantities at a time, by which means it will spread more effectually over the affected parts, and be conveyed into the stomach and intestines. This is a much better method than scouring the child's mouth with a rag on a spoon or stick; which, for the reasons before mentioned, rather serves to increase than relieve the disorder. The mouth of the infant, and the mother's or nurse's nipples, may also be gently touched with gum Arabic, or dragon's blood, dissolved in warm water to the consistence of a thin jelly; cream may also be used for the same purpose.

Vomitings in the course of this disease should be assisted by two or three grains of the powder of ipecacuanha, or half a grain of emetic tartar dissolved in an ounce and a half of water, and administered in the quantity of one or two tea-spoonfuls, according to the age of the child.

If the infant refuses the breast, it will be necessary to convey sustenance into it's body by clysters; these should be composed of thin broths, or even pap strained for the purpose: blisters may perhaps be applied with some hope of relief, and strict observation should be made whether the disinclination arises from any cause in the milk, such as it's being too gross, or the contrary, in either of which cases immediate recourse should be had to a change.

After the disease is removed, the parts which the eruptions and crust have weakened, may be restored to firmness, by putting frequently into the mouth a little syrup of dried roses, or honey of roses, to which may be added a small quantity of Armenian bole.

Infants at the breast are also subject to various other kinds of eruptions; but they are, in general, so far from being injurious, that they may be considered as efforts of nature to discharge gross or acid humours: no attempts, therefore, should by any means be made, to free the skin from them by external applications; nor should medicine be directed for that purpose, without extreme attention to the constitution of the child, and the state of it's body.

The causes of other eruptions, besides these critical ones, have been already shewn in the foregoing chapter. They may principally be attributed to impropriety of food, both as to the matter of which it is composed, and the manner of taking it; or to carelessness, and neglect in the great article of cleanliness: in both cases, the cure will be effected by the necessary regulations; the correction of the aliment, and the restoration of cleanliness, will leave no occasion for the efforts of medicine.

Eruptions of different kinds are frequently mistaken for the *itch*; and the use of greasy ointments has, in many instances, produced unhappy consequences: before any such measure is adopted, it will be perfectly right to try the effect of magnesia, with rhubarb, and such other cooling and correcting medicines; which will generally perform an effectual cure, without the assistance of sulphur and hogs-lard; the only superficial remedy that ought ever to be permitted.

But in all eruptive complaints, to keep the body open and cool, and at the same time to avoid taking cold by improper exposure, or violent exercise, and to adopt a mild and temperate regimen, seem to be the most effectual means that can be used to

ensure a speedy and effectual removal of these disagreeable appearances.

It may be necessary to caution our readers against considering and treating *looseness* in infants as a disease; it is in many cases, in itself, of a very contrary nature; and the causes, not the effects, should be attacked by medicine: the best which can possibly be offered is magnesia; which, either alone, or with the rhubarb, according to the degree of the disorder, will first alter the appearance of the stools, by correcting those acids which have occasioned their green colour, slimy consistence, and foetid smell; and by persisting in the use of it, will, in most cases, reduce the quantity of the discharge, without giving it so sudden a check as to endanger worse consequences. When the purging is accompanied with such violent pains in the bowels, as to call for immediate alleviation, from two to six drops of laudanum, according to the age, may be given; and where the stools are sharp and scalding, stripping the skin as they pass, clysters will be necessary.

These clysters may consist of a tea-cup of gruel, or of thin mutton broth, with a small quantity of sweet oil, and a few drops of laudanum; but, if the stools exhibit no unnatural appearance, the common clyster of warm water, milk, and sweet oil, will answer the purpose.

The *rising of the lights*, a disease known also by the names of the *croup* or the *chock*, is a kind of asthma or suffocation; and may be occasioned by cold, damp, or any circumstance that tends to suppress perspiration. It is seated in the cavity of the wind-pipe, and consists of the matter separated there, becoming so thick as to obstruct the free passage of air into the lungs.

A voice uncommonly shrill, clear, and sharp, is the first indication of this disorder, which, of all others, has the most flattering, though not least dangerous appearance; for during the course, and even to the most fatal termination, it seems to be attended

attended with no other complaint than a quickness or shortness of breath, accompanied with a snoring noise; the pulse is quick, and at first high, but it declines in the progress of the disease, and falls remarkably low and weak, as the patient's case grows desperate.

But this disorder may be found in different situations, and described by very different symptoms: when it is attended with all or any of the marks of inflammation, such as high colour, strong pulse, and considerable thirst, bleeding and evacuation by clyster (if necessary) are recommended, immersion of the lower parts in warm water, breathing over the steams of warm liquids, such as camomile tea and vinegar, or vinegar and warm water; flannel cloths dipt in a fomentation of camomile tea, and then sprinkled with camphorated spirits of wine, may be applied round the neck, and cataplasms, or poultices, of white bread and milk and sweet oil.

Asafoetida has also been prescribed, and may be administered by dissolving twenty grains of it in one ounce of simple mint-water, and sweetened with common syrup; but as from the nauseousness of this medicine it is extremely difficult to get it down, it may be conveyed into the body by giving the same quantity of asafoetida in a clyster of thin chicken broth, or milk, water, and oil.

The rapid progress of this disease, which is frequently critical in two, three, or four days, points out in some cases the immediate necessity of applying a blister round the neck, and of bleeding; but if the pulse continues firm, and the difficulty of breathing does not increase the second or third day after seizure, there are great hopes of the patient's recovery, without either losing blood or blistering.

Upon the whole, it will be understood, that as this disorder puts on several different appearances, it will be necessary to adapt the treatment and medicines to the various

symptoms, always remembering, that the low and languid state of the disease, is more dangerous than the feverish and inflammatory; because in the latter case, variety of remedies present themselves; but in the former, little more can be done than to assist the operations of nature, by the external applications before directed.

As this disorder is in some measure local, children inhabiting low and damp situations, and the flat coasts of rivers communicating with the sea, being found most liable to it, it will be necessary to guard against frequent returns, by avoiding wet, cold, and exposure to sharp winds.

If the infant who has been subject to the attacks of this disease is of a gross habit, it will be necessary to regulate it's diet: spare and thin constitutions are seldom affected by it; but in all cases heavy food is to be avoided, and whatever tends to wind or indigestion.

Convulsion-fits, when they are not the fore-runners or companions of other disorders, are occasioned by a violent agitation of the brain, affecting the whole nervous system.

But the occasion of convulsions in infants is to be found in a great variety of other causes more evident to our senses and familiar to our understandings. The appearance of convulsion-fits is in distortion of features, startings, twitchings, and contractions, attended with blackness about the mouth and eyes, and not uncommonly a cough, vomitings and purging, and almost constant sleepiness between the fits.

The approach of acute and epidemic diseases in children is frequently discovered by attacks of this sort, before the appearance of the eruptions. In the small-pox, measles, and other disorders of the same kind, convulsion-fits are usual symptoms; at the season of breeding teeth, children are peculiarly liable to them, and they are frequently produced from irritation of the nervous system, by acrid humours in the stomach

or bowels, worms, twitching and gnawing the intestines, and violent pains of any kind, whether proceeding from disorder or any external injury.

Hence it will be clear, that the cause being removed, the convulsions will be at an end: as soon as the small-pox or measles appear on the skin, the fits, however violent before, cease immediately; in cases which proceed from acidities, the correction of the indisposition in the bowels and stomach will put a stop to the convulsions, and the mixture of magnesia and rhubarb, omitting one half the former, and adding the like quantity of powder of prepared crabs-eyes, will more effectually answer that purpose than any other medicine.

When the fits are occasioned by teeth, bleeding is required, and even small blisters to be kept open; costiveness should be prevented by manna, or other cooling physic, and the common clysters, if necessary, with a few drops of laudanum. A small quantity, not exceeding three or four drops, of the tincture of castor, may also be given in a tea-spoonful of pennyroyal-water, and repeated more or less often, according to the frequency of the fits.

It may be proper to remark, that when the convulsion is discovered to arise from any external cause, the removal of that cause is first necessary. Instances have happened, where pins thrust into the child's body, a leg, foot, or arm forced into an unnatural posture, or even the slip of a knot in tying their cloaths, occasioning unusual stricture, have produced these fits; and, perhaps, if examination was more frequently made into the situation of the child's body, a disease so dreadful in appearances, and in consequences so commonly fatal, might sometimes be prevented, and very often removed, without the assistance of art, or the interposition of medicine.

During the continuance of the fit all operations and applications are vain, and serve only to add to the torments of the unhappy

little sufferer, without the smallest hope of affording him relief. Patience, and the mild and gentle treatment which we have recommended, will always produce a temporary, and in most cases an effectual cure. Shaking the child to rouse it, and the application of spirits or essences to the nostrils, temples, &c. have very often dangerous effects. Let the child be kept perfectly quiet, and the use of opening and correcting medicines be continued between the fits, and they will be soon found to return less frequently, and with abated violence; till the cause being totally removed, and the contents of the stomach and bowels reduced to a natural state, the disease, with all the dreadful symptoms, will disappear, and the return may be in a great measure prevented by a proper attention to regimen and evacuations.

Where no medicine is at hand, the body may be opened by a tea-spoonful of the juice of pellitory of the wall repeated in six or eight hours till it has effect, and poultices of the peony root, scraped or beaten in a mortar, may be applied to the feet; but though these simple prescriptions may, in cases of necessity, afford help till the correcting medicine can be had, the latter is always to be preferred when it can be procured; for it is obvious to common reason and observation, that convulsion-fits in children almost constantly originate in complaints of the stomach and bowels; and therefore, to attack the disease in it's first seat, is to ensure the fairest prospect of success.

We cannot dismiss this article, without again urging our readers, not to consider convulsion-fits in children as an habitual disorder, but to seek for the cause of them in the first appearance; that discovered, the cure will be easy: but to load the stomachs of infants with musk, asafoetida, castor, and other medicines of the same tribe, usually prescribed in these cases, is to weaken and distress the patient without forward-

forwarding the cure; and to expect salutary effects from the efforts of art, without consulting the operations of nature; which in all the diseases of infants, but more especially in this of which we are now treating, are the objects of our first and chiefest attention.

The *hooping-cough*, or *chin-cough*, is a disease almost peculiar to children, though instances sometimes occur of severe attacks of it on grown persons; it is certainly contagious, though perhaps the opinion that it arises in all cases from infection, may admit of doubt.

The seat of this disorder is in the passages which convey air into the lungs, and in the lungs themselves; where a quantity of thick phlegm lodges, and irritating the parts to endeavour at throwing it off, occasions coughing to such a degree of violence in children, as even to bring on convulsions.

The food of new-born infants, or indeed until they are five or six months old, will admit of very little alteration. When the hooping-cough attacks those who are weaned, great care should be taken so to regulate their diet, as not to admit the use of any thing that may encrease the load of phlegm: butter, in particular, should be avoided; bran tea, or weak whey made with any acid, and sweetened with honey, may be the common drink; or, indeed, tea made from any of the pectoral herbs, such as pennyroyal, hyssop, or the leaves and roots of the common mallow.

Where the disorder proceeds with great violence, bleeding is sometimes recommended; but it should only be used when there is a considerable degree of fever: vomiting I have ever found a much more effectual remedy; and the most easy way of promoting it, is to dissolve one grain of emetic tartar in two ounces of water, and to administer a tea-spoonful at a time at the distance of half an hour, till it procures a discharge. By the use of this medicine alone, the hooping-cough is fre-

quently carried off, proper care being taken to keep the body open by magnesia and rhubarb, or manna dissolved in fenna tea, of which a tea-spoonful may be given as often as necessary. And, indeed, common reason will inform us, that in a disorder which proceeds from obstructed passages, the only method of cure is to clear them as expeditiously as possible; a work much more likely to be accomplished by the use of vomits, than by oils and balsams, which, if they ever have any good effect, are so slow in their operations, that the patient runs no small risque of being worn out by the disease, before a fair trial can be made of their efficacy. Medicines of this kind, which must proceed to disperse the phlegm, will always be uncertain in their effects; but those that tend to an immediate removal of this obstruction, strike at once at the root, and overcome the disorder, whilst the patient has strength enough to support the struggle.

Wood-lice, or millepedes, have also been recommended; an infusion of which, dried and powdered, may be made in white-wine and water, as follows.

Millepedes, one ounce—wine, a quarter of a pint—water, a quarter of a pint.

Let it stand about twelve hours, pour it off quite bright, and give about two tea-spoonfuls twice or thrice in twenty-four hours.

If the coughing fits are extremely severe, the above decoction may be sweetened with a tea-spoonful of the syrup of poppies, or may have the addition of six drops of laudanum for a very young child, and eight or ten for one more advanced.

When they are less frequent and violent, but the disorder has been of long continuance, from six to eighteen grains of the bark, according to age and strength, may be given in a table-spoonful of pennyroyal, or some simple water, sweetened with honey: some add two or three grains of castor, and advise blistering, and bathing the feet in

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warm water; both which may be tried in obstinate and dangerous cases.

Much confidence has been placed in change of air; it is a prescription generally very agreeable, and therefore the more readily adopted: and where the remove is from a confined or low situation, to a free air and elevated ground, the change will no doubt produce very favourable effects, more especially if the disorder is in any degree epidemic, and the air we escape from charged with infection; but where the patient's ordinary habitation is well situated, and circumstanced, where it is neither in town or village, or contiguous to other dwelling-houses, and where no suspicion of infected air or surrounding contagion can be entertained, the advice to remove seems rather dictated by an inclination to comply with old rules, than by an expectation of benefit to the sick.

Not that we would be understood to insinuate, that change of air is at all times useless; many occasions offer in which it is essentially necessary; and the peculiar qualities which impregnate the air of particular situations, such as the vicinity of the sea, Bath, &c. may be in a variety of cases of considerable advantage: we only mean to hint, that in the whooping-cough no express reliance ought to be placed on the mere change of air, unaccompanied with attention to other regulations and prescriptions; though when the alteration can be made for a better, it may certainly conduce to recovery.

The *rickets* is a disease which generally commences about the time that children first begin to walk, or are expected to do so. It is said to have made it's first appearance in the western manufacturing counties, and to have been occasioned by the introduction of such manufactures as confined the labourers in them to a sedentary and inactive life; but as this disorder is now prevalent in all parts of these kingdoms, it has more probably been produced

and extended by the change of diet and increase of luxury, which has taken place in the last and present centuries.

But however it originated, idleness, sloth, and confinement, are no doubt great promoters of this disorder, which may possibly be in some cases derived from the parents; but more frequently arises from causes subsequent to the birth.

Such parents as have in their infancy been afflicted with this disease; such as are of a cold or relaxed habit, and have indulged in an idle and sedentary life; or those who have been accustomed to a slender and watery diet; will neither produce children with the seeds or ground-work of good constitutions, nor even with strength enough to struggle with the infirmities which they inherit from their parents. Nothing is more certain, than that though the diseases of the parents may not always be conveyed to their progeny in the same forms wherein they appear on themselves, yet the offspring of those who have laboured under tedious and wasting disorders, of the consumptive or dropical kind, or those who are tainted with venereal poison, nay, even the children of old age, will generally be subject to the rickets; which is in fact a complication of the diseases we have enumerated; and exhibits at times symptoms of each; and it will be found, almost without exception, that strong and healthy children are not to be met with among the immediate descendants from age, sickness, or debility.

But circumstances attending the state and progress of infancy, are the more common causes of this disease. Damp air, wet linen, want of attention to the evacuations, a diet over high and rich, or too meagre and scanty, salt and hard provisions, high spices, many sweet things, and strong liquors of any kind either swallowed by the nurse or the infant itself, and improperly warm and stimulating medicines, will generally produce the rickets; which may also

also be acquired by suffering the infant to remain in a state of inactivity, or by giving it any violent or unnatural exercise.

Acute diseases, such as the small-pox and violent fevers, are very commonly followed by this disorder; which seems, in all cases, to seize on those helpless victims who have been reduced to any degree of weakness, either by accident or distemper.

The best preventive course that can possibly be prescribed, is moderate exercise in good air, frequent washing, and extreme cleanliness in the skin and in the cloathing, rubbing the back and limbs of the child with the hand whenever it is undressed, frequent change of posture, and great regard to it's little wants and cravings; for it will often be found that vexation, and a habit of crying, will contribute to increase, if it does not occasion this disorder.

The signs by which the rickets are to be discovered, are a total disinclination to every kind of exercise, and even the common motion of the body; a large head, a swelled and hard belly, loose spongy flesh, inability to stand, occasioned by weakness and pains in all the joints, and emaciation or wasting of the flesh: in the progress of the disease, the bones swell at the joints, and those of the back, shoulders, arms, legs, and thighs, change their figures and grow crooked and deformed; the forehead swells out and overhangs, the cutting of the teeth is stopped, and those which already appear become loose, and fall out with rottenness; the breast rises high and contracts in breadth, and the belly and adjacent parts seem tight and stretched. Yet, with all these appearances of actual disease, the patient preserves an extraordinary clearness and sharpness of apprehension, and even seems to possess a degree of ripened understanding; till the loss of appetite, difficulty of breathing, or lying on one side, a cough and fever, are succeeded by a drooping, low, and irregular pulse, which is the last stage of this melancholy and too often fatal disorder.

But there are a variety of circumstances attending this disease, which cannot be brought within this general description, and yet will be obvious to a careful and interested observer, and are of material consequence in effecting a cure: such as the age at which it first appears; which of the above symptoms are first discoverable; whether the bones only thicken in bulk, or project in irregular forms; which side is most affected in lying down; and, in particular, whether there is any appearance of water in the head or on the lungs.

The first step towards removing this disorder, is to assist nature in the resumption of her offices, by such a regimen as seems best calculated to restore her weakened powers; and enable the patient to acquire such a degree of strength as to resist the progress of the disease, and receive such medicines as are adapted to promote and accelerate the cure.

For these purposes, the food should be nourishing, yet light and easy of digestion. If the child has been accustomed to eat flesh, it should be indulged in the use of it once a day, but it should consist of white meats and poultry only; all kinds of shell-fish may also be allowed at dinner: the supper should be biscuit and raisins, or other dry fruits; and the breakfast, water-gruel with sugar and currants, milk chocolate, or panada. Let the common drink be Port-wine and water, in the proportion of one-third wine, and two water; but if that should be inconvenient, the use of a small quantity of soft and fine malt liquor may be permitted. In younger children, the usual spoon-meats, rice-puddings, and bread-puddings, with a little wine and sugar, will constitute a wholesome and proper diet.

To this regulation of the patient's food must be added, good air, and gentle but often repeated exercise; great attention to supply the body with cloathing suited to the vicissitudes of heat and cold; and if the child has lost, either partially or wholly, the use of any of it's limbs, frequent chafing and rubbing

rubbing the part with a warm flannel, or the hand, will contribute to the freedom of circulation, and to the dispelling of unnatural obstructions.

Modern practice, founded on reason, and justified by experience, has taught us to reject the long roll of receipts and prescriptions which swelled the books of those who wrote on this subject in the last century. To keep the body reasonably open; to guard against indisposition of the bowels and stomach, by the use of magnesia, rhubarb, and if from sickness or loathing they should appear needful, gentle vomits; and to encourage the patient in habits of cheerfulness and content, by promoting every diversion and amusement which may excite him to use exercise proportioned to his strength; have been long discovered to be the most efficacious remedies that can be applied to remove a disease which originates, for the most part, in weakness, and gives way on every side to returning strength.

Above all things, the use of sea-bathing, or the cold-bath, may be relied on, and scarce ever fails to produce happy effects; but as a weak and shattered frame will hardly in the first instance support the shock of being plunged over head and ears in the water at once, the process may be begun by washing from a basin or other vessel, first wetting the top of the head and the wrists, and then going on to wash the whole body. This should always be done in the morning, and the patient should be wiped dry and gently rubbed, till a pleasing glow of heat extends itself over the whole surface of the skin.

Being thus used to the water, the child will soon acquire a liking to it, and bathing in the common way will of course cease to be terrifying or alarming. By the constant use of washing, we have known children of little more than a year old shew the highest marks of pleasure at the sight of their usual bathing-vessel, and submit to the operation, not only with cheerfulness, but with every token of satisfaction.

But though we agree with the practice of the present day, to consider the administration of large quantities of medicine as rather injurious than beneficial; yet we cannot but admit, that cases and circumstances sometimes present themselves, where it would be equally absurd and dangerous to refuse the interposition of medical assistance: for such emergencies, we shall subjoin approved prescriptions; with this observation, that in most cases regimen is preferable to physic, and that where the latter is absolutely necessary, it should be given with a cautious and sparing hand, and neither repeated oftener, nor continued longer, than the exigency of the particular circumstance requires.

When the child is remarkably costive, and the excrements hard, and only voided with griping and pain, the following clyster may be administered.

From a quarter to half a pint of water, in which half an ounce of the root, or half a small handful of the leaves and flowers of marsh-mallows have been boiled a quarter of an hour—powdered anniseeds from six to ten grains—coarse moist sugar, from one to two ounces—sweet oil, half a table-spoonful.

This clyster must be given moderately warm, and the quantity must be proportioned to the age of the subject; one half the above being sufficient for an infant of six months, and a larger quantity necessary for those of a more advanced age.

If sickness, loathing, or indigestion, should render the use of an emetic necessary, great care must be taken that it be extremely gentle in its operation; and the beforementioned mixture of emetic tartar and common water, or a few grains of powder of ipecacuanha in any pleasant liquid, seem best calculated to throw up the offensive matter, without occasioning any violent strain or emotion, which in every stage of this distemper should be carefully avoided; nor should the use of vomits be permitted at all, unless there is an apparent disposition to discharge

discharge the stomach in that way; nor in any case where they may risque the loss of blood from the nose, or otherwise; from which consequences may be apprehended, not to be counterbalanced by the best effects of the vomit.

If the child is of a gross habit, and purgatives are required more immediate in their operation than the magnesia and rhubarb mixture, the following may answer the purpose.

Of fine manna, from four to six drams—cream of tartar, from five to seven grains—simple cinnamon-water, from one ounce to an ounce and a half.

The smallest quantity for a child of six months old, and so in proportion, to be given in the morning fasting.

Or, of lenitive electuary, from one dram to two—syrup of roses, from one dram to two and a half—weak fenna tea, from one ounce to one ounce and a half.

To be administered in the same proportions as the former, and early in the morning.

Diet drinks are also recommended, for which the prescriptions are various: that which follows seems well calculated to sweeten the blood, and strengthen the stomach, the purposes for which these draughts are for the most part intended.

The herbs maidenhair, liverwort, agrimony, and water-trefoil, of each a handful—horse-radish root scraped, six ounces—great water-dock root sliced, twelve ounces—lemon-peel, one ounce—raisins stoned, one pound.

Boil these ingredients half an hour in four gallons of water, pour it off fine, and give a tea-cupful, or in infancy a smaller quantity, at least three or four times a day, adding a tea-spoonful or two of raisin-wine.

Having thus given a few forms for medicines where this disease refuses to yield to

the gentle treatment offered in the foregoing pages, it must remain for the friends, nurses, and attendants of the sick, to judge of the proper time for the administering of them, which should in all cases be directed by the situation of the patient, and the symptoms and circumstances as they arise. But a general caution may be admitted, not to be too forward in pouring physick into the stomach, but to attend with patience to the effect of regimen and management; a perseverance in which, will in almost every case at length make a favourable and happy impression.

Of the various disorders to which infants are peculiarly liable, at least two parts in three originate in the pain and difficulty of *cutting teeth*; nor will this appear in the smallest degree surprizing, when we consider the structure of these useful and delicate instruments.

The extremities of the roots, the whole gum, and the thin internal membrane or skin which covers the teeth in their hidden state, are furnished with various branches of the nervous system, so that in their enlargement, projection, and forcing through the gum, these nice and susceptible organs are irritated, torn asunder, and separated; and the general continuation of the nerves from the brain through every part of the human frame, will sufficiently account for the assertion in the preceding paragraph.

Hence follow restlessness, watching, fevers, costiveness, diarrhoea, and even convulsions; and hence proceed indigestion, acidities, wind, griping, nauseous stools, vomitings, loathings, and the whole train of complaints in the stomach and bowels; which in many, if not most cases, are but symptoms of this painful and dangerous operation.

It is impossible to be precise in describing the time of cutting teeth, which depends chiefly on constitution: healthy and robust children will breed their teeth early, and with comparative ease; whilst those of sick-

ly or delicate habits, will labour under an increased severity of pain, at a more advanced age.

But from six to twelve months is the ordinary season of teething: some instances occur where the symptoms appear even at an earlier period, and some where no signs of approaching teeth are exhibited till fifteen, sixteen, or even eighteen months; but as these cases are much less frequent, so the first-mentioned age is to be considered as the usual and proper time.

The ordinary appearance of the symptoms of this painful effort of nature is in heat, restlessness, itching of the nose and lips, startings, twitchings, inflamed eyes, and a continual driveling; these are followed by sickness, loathing, griping, wind, and either a violent looseness, or the contrary, and frequently terminate in fever, convulsions, and death.

The first object of our attention should be to prevent, if possible, the appearance of any of those symptoms in any dangerous degree; the next to remove them, if they have already appeared, as expeditiously as safety will admit.

If the child is at the breast, the diet of the mother will be of material consequence to the infant, and proper regulations on this head will be found in the foregoing chapter. But if it is already weaned, and has been accustomed to taste animal food, precaution is at this time necessary in the use of it; and light broths, chicken or beef tea, and palatable sops, are to be preferred to flesh meals of any sort.

Diluting liquors should be plentifully administered: scarce any can be found more wholesome than sweet milk and water, though baulm-tea and other herb teas are by some held in higher esteem.

But especial care should be taken, that neither the food or drink of the child be given too warm: the extreme tenderness of the whole mouth and gums will not admit of the additional pain which neglect in attend-

ing to this regulation must infallibly occasion.

From six months we may begin to expect the approach of teeth, and after this time more particular care is requisite to promote proper evacuation, and lessen any extraordinary degree of it. The body may be kept cool and open by doses, repeated as often as they are necessary, of the magnesia and rhubarb; and in case of obstinate costiveness, clysters should be administered till the stools become natural, and reasonably frequent; should the child, on the contrary, be seized with violent looseness, the magnesia may be exchanged for prepared crabs-eyes, or even common chalk, in the same quantity.

Of all the mistakes into which ignorance has betrayed the attendants on infants, scarce any has been more prejudicial than the almost universal custom of rubbing their gums with hard substances, or permitting them to carry corals, glass, or other impenetrable weapons for that purpose. As the progress of the teeth excites heat and itching, the child is disposed to apply whatever comes within it's reach to allay these disagreeable sensations; it should therefore be furnished with the means of procuring present ease, without obtaining it at the expence of future injury: whatever will easily receive an impression, without breaking or crumbling, is the fittest for this purpose, and perhaps scarce any thing better can be found than a crust of stale bread, or a stick of fresh liquorice, which may be frequently offered to it, or put into it's hand.

The pernicious and dangerous consequences of permitting the use of harder substances, will immediately appear on inspecting the form of an infant's tooth. Nature has provided the edge or upper part of it with the figure and appearance of a saw, thereby qualifying it to force it's way without obstructing the circulation of the blood in the particular part on which it presses; and which must unavoidably be the case, but
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for this wise and salutary provision. The force of applying hard instruments will unquestionably produce the double mischief, of stopping those channels of circulation, and destroying the fine and delicate edge so essentially necessary in cutting it's way through the gum.

But the evil does not stop here: the skin on the surface of the gum, by perpetual rubbing and pressure, becomes thick, hard, and in a certain degree callous; and resisting the attempts of the broken or blunted tooth, occasions violent pains, inflammation, and other fatal consequences.

The teeth generally present themselves in the following order: first, the fore-teeth, the appearance of which, as well as all the others, is frequently foretold by a small white circle surrounding that part of the gum, and describing the size of the approaching tooth; the dog-teeth next break through; and last of all the grinders make up the set of what are called the milk-teeth, and which is generally completed in the second year. About seven years old children begin to shed these milk-teeth, and new ones succeed; and at the age of maturity, commonly about the twentieth year, those which are called the *teeth of wisdom* make their first appearance; but the particular ages here pointed out are not to be considered as the certain times of cutting teeth, which vary according to the health and vigour of the child, and depend on many different circumstances.

The difficulties and dangers which attend cutting the teeth may be frequently obviated, and in most cases considerably lessened, and the diseases and symptoms which occur in the course of it, may be for the most part removed, by attention to a few general and plain rules, applying to almost every case which offers at this critical period of the infant's existence.

To keep the body open by cooling and correcting medicines, to guard against any violent looseness by a proper change of phy-

sic, to supply the want of immediate operation by gentle clysters or vomits, and to regulate the food by the directions already given, are the great lines which lead to the preservation of health and life in this moment of impending danger.

For these purposes, the rhubarb with magnesia, in case of costiveness, and with prepared crabs-eyes, if there is an apprehension of too great a degree of looseness, may be administered with safety, and almost constant success. The clysters may be of the following composition.

Milk and water, or thin chicken or mutton broth, from two to four ounces—common salt, from half a table-spoonful to a whole spoonful—coarse sugar, the like quantity—sweet oil, from half a spoonful to a whole one.

Adapting the quantity to the age of the patient.

If emetics are required, the powder of ipecacuanha may be taken in the manner and proportions heretofore directed.

But there are cases of emergent danger, that require different treatment. Where the efforts of nature are insufficient to burst the gum, and alarming symptoms of inflammation or convulsion begin to make their appearance, the lancet should be applied, and the labouring tooth helped into the world by the tender hand of the operator, which we must in all cases prefer to the cruel mangling of the nail, or the violent compression of a blunt and edgeless instrument.

Bleeding is undoubtedly essential to the removal of a high fever, and violent inflammation; but the blood of infants should be drawn with a sparing hand: more than the quantity necessary for the offices of life is seldom found in their vessels, and to lessen that quantity might occasion such a degree of debility, as to render them unable to support the variety of attacks made on their tender frames in the season of breeding teeth.

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Some physicians have been of opinion, that this operation can by no means be dispensed with, and have advised bleeding with leeches under each ear, as the groundwork of all other prescriptions; and though we do not rate the use of bleeding at so very high a value, yet where it is to be tried, this is without doubt the best way of performing it, both with regard to the ease of the patient, and the less sensible effect it has on the powers of circulation.

Blistering under the ears, or between the shoulders, is often attended with very happy effects; perhaps, keeping open a drain of this sort, or supplying it's place with an issue or seton, may be of use during the whole time of teething. Plasters of Burgundy pitch are said to ease the cough which is frequently troublesome to spare and slender habits.

In fevers consequential to breeding or cutting teeth, four or five drops, or more, according to the age of the patient, of spirits of hartshorn, in a spoonful of simple water, has been prescribed under authorities too respectable to admit of doubt: this medicine is to be repeated four, five, or six times, at the distance of four or six hours, according to the emergency; and the addition of two, three, four, or five drops of laudanum, is recommended with great earnestness by some modern practitioners.

We shall conclude this article with mentioning a few external applications, on the efficacy of which we cannot advise great reliance; yet as they are in themselves perfectly innocent, no inconvenience can attend the use of them.

Dossils, or pledgets of lint or cotton, dipped in warm oil of almonds, and applied to the gums every hour or two till the tooth appears.

A decoction of the head of a poppy, in it's ripened state, used in the same manner.

Pure honey rubbed very lightly on the gum with the finger, or a linen rag.

But medicine, operations, and external applications, will in most cases be rendered needless by regimen and management; for a healthy habit and proper temperature of body are the best preservatives against those tedious, dangerous, and fatal symptoms, which for want of due regard to these essential articles, are too often attendant on the *breeding and cutting teeth*.

The next disease of which we mean to treat, and to which children are most liable at and after teething, is occasioned by *worms*; which, whether they generate in the stomach or are conveyed into it with the aliment, both which opinions have been maintained, are productive of symptoms disagreeable, loathsome, and dangerous; and when these troublesome invaders are suffered to acquire power in strength or numbers, they maintain their posts with such indefatigable industry, that they are with great difficulty expelled.

There are three sorts of *worms* commonly found in the human body, which are distinguished by the descriptions of the *flat worm*, the *round and long worm*, and the small *white worms* usually felt at the extremity of the gut next the fundament, which are called by the learned *ascarides*, but have not yet obtained any descriptive English name.

Other worms have also been discovered in dissection, and in the human excrement, but the difference from those we have mentioned has in most cases been trifling, and the effects they have produced have been so perfectly similar, that we may safely confine our treatment and method of cure to those which are usually found and universally known.

A pale and yellow complexion, weakness, a hard and swelled belly the consequence of a costive habit, wind in the stomach and bowels, gripings, sour and foetid stools, continual thirst, an uncertain but frequently ravenous appetite, itching of the nose and lips, flavering, offensive breath, disturbed

disturbed sleep, heaviness, profuse and cold sweats, fainting fits, and at last paralytic and epileptic seizures, with a great variety of other complaints, which it is almost impossible to enumerate, but being always accompanied with one or other of the foregoing, may be understood to denote worms.

These symptoms are also frequently attended by a low and irregular pulse, shiverings, palpitation of the heart, a dry cough occasioning pains in the side, and other feverish indications.

So many opinions have prevailed respecting the causes of worms, that it is extremely difficult to determine the right.

But reason, as well as experience, teaches us, that unripe or rotten fruits, crude, hard, and indigestible trash, great quantities of raw sallads, cheese, and most kinds of confectionary, though they may not immediately produce worms, are most likely to encourage their growth and increase; that persons of weak habits, and whose employments do not admit of their using much exercise, are most subject to them; and that, if they do generate in the stomach or bowels, they will most probably abound where the intestines are in a distempered state, and for that reason are often considered as symptoms of other diseases.

But from whatever cause they proceed, the necessity of destroying or bringing them off, and preventing their breeding again, is obvious; the former can only be effected by a frequent and judicious use of purgatives, and the latter by such bitters as are most calculated to strengthen the stomach, and act offensively against its intruding inhabitants.

Of the former, the following prescription has been highly and deservedly esteemed.

Jalap, four grains—rhubarb powdered, five grains—calomel, from one to two grains—syrup of black currants, a table-spoonful.

This dose is sufficient for a child of five

or six years old, and may be taken every fourth morning fasting, till it has been repeated six or eight times, taking care to keep the patient from the air, cold water, and damp linen, on the days this medicine is taken.

On the days that the above is omitted, let the child take ten grains of *Æthiop's mineral*, in a tea-spoonful of currant jelly; or rather, if it can be prevailed on to swallow it, in the like quantity of lenitive electuary.

As a common drink, except on the particular purging days, when warm ground-ivy, or spruce-beer may be substituted, we would recommend lime-water and milk, in equal quantities, or the following decoction by way of diet-drink.

Take a handful of each of the following herbs: Purslane, tansey, wormwood, plantain, St. John's wort, and the lesser centaury—orange-peel, half an ounce—gentian root sliced, three drams—raisins stoned, one pound—dried figs sliced or bruised, one ounce.

To these ingredients, add two gallons of water, and boil the whole half an hour, or let them infuse twelve hours in a moderate heat.

This draught may be diluted for weaker stomachs, or rendered palatable by the addition of a small quantity of generous white wine.

Where there is any objection to calomel, the following purging potion may be substituted.

Rhubarb in powder, two scruples—leaves of fenna picked from the stems, one dram—seed of St. John's wort, half a dram—thyme and savory dried, of each a handful.

Infuse and boil the above in a pint of water till it is reduced to half the quantity, where-in dissolve—

Of Rochelle salts, three drams—of fine manna, three drams.

Divide into two doses, and give them at the
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distance of three or four days, repeating them as often as necessary.

But in many cases the following course of *Æthiop's* mineral hath answered every purpose; and we have known repeated instances, where this disease, in a very advanced state, hath been effectually removed by continuing the use of it for three or four weeks.

Give from six to ten grains of the *Æthiop's* mineral in raspberry jam, currant jelly, or any other pleasant vehicle, twice in a day; the first early in the morning, the second at night, at least an hour after supper.

Let all medicine be omitted the next day, and the third morning let the child swallow a tea-cupful of strong fenna tea; if that should be ineffectual to produce stools, let it be repeated till it occasions two at least.

The succeeding day administer the *Æthiop's* mineral, rest the second, and purge off the third day as before; and proceed in the same way till the complaints cease, and the child recovers it's health and complexion.

If this remedy proves effectual, it may be proper to repeat it in the spring and fall for two or three succeeding years.

Black bellebore, more commonly known by the name of *bear's foot*, has been also recommended to be taken either in a decoction of a dram of the green leaves in a quarter of a pint of water; from twelve to fifteen grains of the same herb dried and powdered, and given in a table-spoonful of simple water; or a syrup made with the green leaves and common moist sugar, and given in the quantity of a tea-spoonful once a day.

A spoonful of common salt dissolved in water, and taken daily, has often been attended with very good effects; to this may be added, where the stomach of the patient will bear it, a spoonful of sweet oil.

External applications, such as fomentations, embrocations, and plasters, were

formerly in much use; these were composed of the oils of rue, wormwood, and bitter almonds, of the gall of an ox, and of the powders of cummin-seed, the lesser centaury, or aloes, which were for this purpose reduced into one of those forms; but observations, made on repeated experiments, have established an opinion, that little hope can be derived from the efficacy of these applications, which are therefore, with good reason, in a great measure laid aside. But clysters of fat broth, oil, and coarse sugar, have been found of great service in bringing off the small white worm from the gut or fundament, and allaying the heat and itching occasioned by the irritating motions of those very busy tormenters. And sulphur, taken in considerable quantities, in proportion to the age and constitution of the patient, either in any liquid, or syrup, or jelly of fruit, has been frequently administered with effect.

After the use of medicine has destroyed or expelled these very disagreeable intruders, a two-fold care remains, to strengthen the stomach and bowels, weakened by the various symptoms occasioned by continued irritation, and to guard against the dangers of a return, which will most probably happen, if no precautions are used to prevent the worm from breeding again.

To answer both these purposes, the Peruvian bark may be almost certainly relied on: and we would advise the powder to be taken in quantity from a scruple to half a dram, in a glass of claret or port wine, at least twice a day. If to this medicine the diet-drink or decoction of bitter herbs be added, either as the common drink, or in regular draughts, and the use of both be continued a few weeks, we have great reason to believe the patient's health will speedily acquire a perfect re-establishment.

We have avoided dwelling on nice distinctions, which have been made between different kinds of the flat-worm, one of which

which appearing to have a head, and to exhibit signs of life by various motions, has been called the *folium*, and is said to occasion pains in the liver, stomach, and back; and, as these symptoms differ in some measure from those formerly mentioned, eminent writers have pointed out the discovery of the certain existence of this species of worm by an examination of the excrement, where it is always denoted by several small white bodies, in figure and shape like the seeds of melons or cucumbers, and have prescribed various medicines, as efficacious for the destruction of this particular worm, and the removal of the complaints occasioned by it, which we omit to insert, because we are ourselves of opinion, that the treatment and remedies offered in the preceding part of this article, may be depended on in most disorders which are occasioned by worms of any denomination or description.

Scrophulous ulcers have obtained the name of the *king's evil*, from pretended cures said to have been effected by the royal touch, from the reign of Edward the Confessor, whose reputed piety gave credit to this superstitious practice, which was continued with some interruptions to the last reign of the Stuarts; and the efficacy of this magical operation was so firmly rooted in the opinions of all ranks of men, that a *form of prayer*, or what might with much propriety be stiled an *incantation*, to be used on these occasions, was actually added to the liturgy of the church of England after the reformation.

Nor is this the only species of superstition that has prevailed in attempts to remove the baneful effects of this distemper. Seventh sons, and persons whose entrance into the world have been marked with uncommon circumstances, have been supposed to possess the powers of healing in so wonderful a degree, that a disease often constitutional, and always obstinate in cure, would at once yield to the vir-

tues communicated by the slightest impressions of those hallowed physicians of chance.

The fact is, that when the encrease of population, and the dawn of commerce, drew men together in cities and towns; and in some measure took from the inhabitants of such societies the necessity of procuring the means of existence by violent exercise in pursuing the beasts of the forest, and by daily labour in cultivating the land for bread; this disease, the child of idleness, and the result of a sedentary life, first prevailed: and it's appearance being considered as preternatural, it is not surprizing that extraordinary means of cure should be suggested by those whose great care it was to improve every occasion to promote the interests of the church, by strengthening the hands of royalty; those two powers, in combination, possessing at that time, and wishing to preserve, as well the whole civil as ecclesiastical authority.

Nor did the clergy only add the legislative to the sacred functions: possessed of all the little learning which then enlightened these realms, they were the only physicians; and though their knowledge of the medical art did not extend to the cure of this new distemper, yet they had sagacity enough to discover, that it generally disappeared at a certain period of life, about which time they constantly recommended this operation, and availed themselves of the efforts of nature, and changes of constitution, to attribute the cure to the royal touch, and the effects of acts of devotion performed by themselves.

We have classed the king's evil among the diseases incident to childhood and youth, because instances of it's having seized grown persons so seldom occur, that whenever we discover any symptoms of it in such subjects, we are apt to conceive that we are deceived by appearances, and led to mistake the effects of inveterate scurvy, or some such other

other disorder, for that of which we are now speaking.

At present, this disease may be supposed to originate in the constitutions of the parents, and to be inherited from them at the birth; or it may arise from natural causes, conspiring with accidents, occasioned by a deficiency in air, exercise, cleanliness or attendance, in the state of infancy.

Besides these causes, there are still others from which it may probably proceed, such as eruptive disorders, outward blows, bruises and strains, strictures occasioned by tight lacing, or even gartering, constant leaning on the breast or stomach, or any other unnatural position of those particular parts of the body; to which we may add, bad air, unwholesome or improper food, and whatever tends to corruption or relaxation.

For the best and only means that we know, of preventing this disease, we must refer our readers to the chapter on *the Management of Infants*; which we earnestly recommend to the frequent perusal of those parents who wish to enjoy the blessing of a healthy family, and to see the progress of their offspring through the critical seasons of infancy and youth, unattended with the danger and distress of repeated illness, and in particular, free from the shocking appearances, and melancholy consequences, of this loathsome disorder.

Children of full and florid complexions, are most liable to the attacks of the king's evil; the first symptoms of which are, tumors or swellings in the glands; and it was formerly supposed to affect the seat of the intestines, before it's external appearance, though that opinion has in some measure been exploded, by very ingenious modern anatomists: these swellings in the glands, sometimes appear first in small warty knobs, and for the most part, from immediately behind the ear downward to the neck; which, as they become large or numerous, constitute one considerable swell-

ing, which is sometimes fixed, and sometimes moveable; occasions but little pain, or inflammation; takes different shapes, according to the figure of the gland, and is with great difficulty, brought to suppurate or ripen: and when that happens, and it either bursts of itself, or is opened with a knife or lancet, discharges only a thin matter, with very frequently streaks of blood.

But these swellings are not confined to the glands under the ear, or in the neck alone; they are to be found with precisely the same appearances, in various other glandular parts of the human body; such as the arm-pits, groins, ancles, nay, even the hands, feet, and toes. Swellings in the breasts, and those in the knees, which are usually called *white swellings*, are also most probably of the same kind.

Nor are these the only symptoms by which this disease is distinguished; swelled and cracked lips, nose, and cheeks; sore eyes, with a sharp and acrid discharge, occasioning rawness, and violent inflammation; and dry crusts, or scabs on the elbows, and other joints, with a caries or rottenness in the bones, particularly at the heads or joints, the consequence of the dissolution of the marrow by this penetrating humour; are common attendants on this disorder.

As poverty of blood, and a relaxation of the fibres, are frequently the causes of scrophulous complaints, so the regimen to be observed should be calculated to strengthen and correct; for this purpose, the food should be sufficiently nourishing, but light, easy of digestion, and of rather a drying quality; of animal food, white meats, poultry, and mutton boiled or roasted, but rather the latter, are to be preferred; vegetables should be but moderately used, and biscuits, raisins, dried figs, and other fruits preserved by the sun, without sugar, are to be recommended; that sort of bread, which is made with the smallest quantity of yeast, leaven, or other fermented matter, is the most

most adviseable; and for common drink, any kind of well-concocted malt liquor, or white-wine and water: water alone should in no case be admitted.

A pure air, and exercise, on horseback where the strength of the patient can support it, will be in every case useful; indeed, all means of cure must prove ineffectual, if these essential articles are omitted: a disease, which in some instances actually originates in the want of exercise, will scarce ever be removed during the course of a sedentary employment, or an inactive life.

The use of mercurials and strong purges, has of late years been discontinued, and the place of these medicines has been happily supplied by alteratives, or such prescriptions as, without any visible or violent operation, insensibly sweeten the blood and correct the humours: in such diseases as the king's evil, which is seldom occasioned by grossness of habit, whatever does more than merely keep the body open may be considered as injurious.

The Peruvian bark has been very justly recommended as one of the best medicines that can be administered in this disorder, which may be taken in quantities from ten grains to thirty in Port wine or claret, twice or thrice a day; and lime water prepared from oyster-shells calcined or burnt, and mixed with a small quantity of Port or Madeira wine, may be used as the common drink.

If the bark in substance cannot be conveniently given, two ounces of the powder may be boiled in two quarts of water, till one half the quantity is reduced; to this may be added, when the boiling is nearly finished, one ounce of sliced liquorice-root, and the like quantity of sarsaparilla, with as many stoned raisins and dried figs bruised, as will serve to render it agreeable to the palate: of this decoction, from two to four ounces, according to age, may be given at least twice a day.

As we by no means approve of a multi-

plicity of medicines, the following powder and diet-drink are only mentioned as the approved prescriptions of physicians whose practice and writings have been very deservedly held in the highest estimation.

Steel prepared with sulphur, three drams—rhubarb powdered, three drams—Winter's bark, one ounce—salt of wormwood, half an ounce—finest sugar, two ounces.

Mix them in a mortar to a fine powder, and give the weight of a dram once in twenty-four hours.

For the diet-drink take—

Lime-water prepared from oyster-shells calcined or burnt, three pounds—sarsaparilla cut and bruised, one ounce—China root, half an ounce—Sassafras wood, three drams—liquorice-root sliced, half an ounce—raisins of the sun stoned and bruised, four ounces.

Infuse twenty-four hours in a gentle heat, and strain it off for use.

This may be taken in the quantity of a small tea-cupful, twice a day; in the morning fasting, and in the afternoon, at least an hour after and before eating.

The extract or juice of hemlock hath also been advised; but as taking it in any considerable quantity is frequently attended with some degree of danger, especially to children, we would rather wish to confine the use of this herb to external applications, in the form of cataplasm or plaster, to old and cancerous ulcers; where it hath frequently produced very sensible alterations for the better, though we cannot from our own knowledge speak of any instance in which it hath effected a compleat cure.

The herb vervain is not without it's advocates, and is said to have been very efficaciously used in this disease. The wounds occasioned by scrophulous tumours are directed to be washed with a distilled water or infusion of the leaves, mixed with equal

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parts of Port wine and vinegar, and to be dressed with an ointment made also from the green leaves and hog's lard: nay, some go so far as to ascribe extraordinary virtues to the fresh root suspended by a ribband, so as to reach the pit of the stomach, next the skin, and renewed as it grows dry.

But of all the remedies that have ever been offered for the removal of this tedious and painful disease, we are inclined to believe none has ever been found more effectual than bathing in the sea; to which if we add the internal use of the sea-water in such quantities only as will serve to keep the body open; and if the sores or ulcers are carefully washed with the same water, or rather with the froth which rises on every wave as it beats on the shore, and attention be paid to the other regulations of exercise and diet; higher expectations may be formed of obtaining a cure, than from the almost voluminous prescriptions and receipts, which not only fill the works of the learned, but are handed down in most families, as approved specifics for a disorder which has hardly ever been eradicated by the help of any one of them.

Nor do we apprehend such restrictions and precautions as have been laid down by modern writers, with respect to the external and internal use of sea-water, are absolutely necessary to be observed. We have known many instances where the course of it has been continued through the severest seasons of the year, with manifest advantage to the patient; but we do not remember a single one, where it has proved in the smallest degree prejudicial.

A tumour once formed, all attempts to reduce or disperse it will in general prove ineffectual; some little additional warmth of flannel, or other soft woollen cloth, may be necessary to promote suppuration or ripening; and where the tumour hath been opened, or the matter contained in it has burst the skin of itself, and a considerable discharge continues, cleanliness and com-

mon digestive salves, or ointments, will prevent the wound from being troublesome; though in some instances it may be necessary to dilate or enlarge the lips of it, which may be done by gently thrusting in a doffel of lint rolled hard and dipped in the ointment with which the wound is dressed: and not unfrequently fungous, or what is commonly called *proud flesh*, will make it's appearance, which may be removed by mixing a small proportion of red precipitate powder with yellow basilicon, and applying it on cotton or lint. The use of caustics, or the knife, to extirpate or destroy the gland, and other chirurgical operations, are of a nature much too critical to be discussed in a work which is intended for general use, and ought to contain no rules for practice which cannot be made familiar to every understanding.

Nor do we conceive that these violent means will be often necessary, if the patient conforms strictly to the foregoing regimen and gentle treatment, and waits with patience the effect it will in due time certainly produce. Many instances might be given of fatal consequences attending the too hasty processes of incisions and cauteries; but it would be an invidious and useless talk to point them out.

The *hydrocephalus*, or *dropsy in the head*, is of two kinds; one of which is external, when the water is seated between the skin and the skull; the other is internal, when the water gathers within the skull, and immediately upon the brain.

This melancholy and almost hopeless disease, which seldom shews itself but in the state of childhood, is often occasioned by blows and bruises received in the frequent falls which infants are liable to; and may serve as a lesson against that fatal indifference with which they are too often intrusted to the care of those who are unable, or from indolence or inattention, unwilling to watch their tottering steps, and guard them against the dreadful consequences of such
external

external injuries: for though this disease may in some instances be attributed to other causes; such as weakness, or relaxation; a natural disposition in the brain to separate and produce a larger quantity of that whey-like matter, which is called the serum of the blood; or from a defect or deficiency in the secretion or separation of the urine from the alimentary fluids; yet we think ourselves fully justified in asserting, that it much more commonly arises from acts of carelessness, and disregard to the accidents above described.

The general symptoms of the dropsy in the head, are pains in the neck, shoulders, extremities, and sometimes, though not often, in the arms; uneasiness in the head and stomach, and many other complaints so very similar to those of disorders occasioned by worms, that it is frequently difficult to distinguish it. As the disease gains ground, the symptoms become more alarming; a violent pain in the fore part of the head, and extending from one temple to the other, sickness of the stomach, drowsiness and weariness, are succeeded by an irregular and languid pulse, extreme difficulty of breathing, violent heat, and other symptoms of fever; and, in the last stages, the sight, and every motion, become disagreeable, and a quick pulse, a certain degree of delirium, and either a lethargic insensibility, or convulsion, compleats the sad catastrophe.

The cure of this disease, in any stage of it, is extremely doubtful: the resemblance it bears to worm cases, has induced many persons to administer the remedies prescribed in those disorders; and as there is a possibility of mistake, and these medicines cannot be productive of injury, a trial of them may be extremely proper.

Others have recommended following the treatment of the common dropsy, both as to regimen and physic; and to promote a discharge from the nose, by snuffing up powder of white hellebore and other stimula-

tives; but we are apprehensive it will in most cases be extremely difficult to reach the seat of this disorder. All attempts to discharge the water, by opening these tumours, will occasion almost instant death.

The *scabbed head*, is the most offensive and loathsome disease to which children are liable, and is occasioned for the most part by want of cleanliness, and by unwholesome and improper food.

The first appearance of this disorder is in pimples or hard lumps, the heads of which bursting, a thin acrid humour issues, which soon creates a scurf or crust over the surface, whilst the sharp matter beneath eats and corrodes, forming at length one continued sore over the whole head.

Issues and setons have been recommended, and are doubtless of utility in very obstinate cases; but the progress of the disease may generally be prevented, and the cure effected, by keeping the head perfectly clean with a wash of Castile soap and warm water, giving at the same time the *Æthiopian's* mineral, and senna tea at intervals, as advised in disorders occasioned by worms, and by a slight regulation of the diet.

Some advise small doses of calomel to act as an alterative only, and the antimonial wine in such quantities as the stomach will bear: if these are administered, a grain of the former, or from five drops to a dram of the latter, may constitute the dose; but the more simple method of treatment will in most cases prevail without the interposition of mercurials, which often give a sudden check to this eruption, and may be attended with very serious consequences.

Why *chilblains* should be considered as one of the most obstinate kind of eruptions incident to children, or why this disorder should be classed among the eruptive diseases, any more than whitlows, boils, or any other species of external imposthume, we confess ourselves at a loss to discover. We have been led from our observations to describe the chilblain as an abscess occasioned by

by partial inflammation, excited by the particular part being exposed to an extraordinary degree of cold, wet, or damp, for a considerable time, and then being too suddenly heated by violent exercise, or approaching too near the fire.

The appearance of chilblains is so universally known, that it will be wholly unnecessary to offer any account of the symptoms; nor does the method of cure require any very extraordinary degree of attention: if the inflammation is considerable, it cannot be wrong to take opening physic, and to keep the part reasonably warm; but we do not altogether approve of bathing the part with brandy or other spirits; on the contrary, we recommend fomentations of warm water and bran, the liquor in which turnips have been boiled, or any other of the like emollient quality. If the disorder has proceeded so far as to occasion actual wounds or sores, they may be dressed with plasters of the common ointment of bees-wax, mutton fat and oil, or Turner's cerate; and we apprehend these methods of treatment will either prevent their being highly troublesome, or speedily remove the complaints when they are already become so.

Having now gone through the list of diseases to which infants and children are more peculiarly liable, we shall dismiss this chapter with repeating some few observations, which however frequently they may have occurred in the foregoing pages, cannot be too strongly inculcated: observations arising from the application of plain reason to common experience; which, joined together, will always be found sure guides to safety and success in the ordinary management of diseases, and the needful practice of physic. And we desire our readers will in all cases examine by these lights, the regulations and prescriptions laid down and intended in the course of this work; because, where they are found consonant to these excellent directors, they will be submitted

to with cheerfulness, and followed with confidence: and we do not entertain a wish, that a single individual should adopt our ideas, without being thoroughly convinced that they are founded on those principles by which we expect to be judged.

The first observation which occurs is, that in most diseases nature points out to us the obvious method of cure; that we should, therefore, on every occasion, exert our faculties to discover which way the efforts of nature tend; lest failing to co-operate with her, we should counteract her designs, and all our endeavours be not only rendered useless, but injurious.

Our next care should be to suspend the use of medicine, at least in any considerable quantity, as long as it can possibly be avoided without incurring actual danger: in acute diseases, critical circumstances frequently afford relief in a way that physic might in many instances obstruct; and it behoves us to wait for those appearances with patience and attention, when we may with certainty interpose the assistance of art, without the danger of mistake, or the hazard of misapplication.

In disorders of slower progress, another reason presents itself for delaying the prescriptions of physic: regimen will in very many cases effectually answer all our purposes, and when this happens, the disease will be much more effectually eradicated than by the operations of medicine; because, in the one instance, the cure is effected by a thorough change in the constitution and habit of body; in the other, the malady may only have retreated from the vigorous attacks of the physician, and may rally again, and regain its ground, the moment he has quitted the field.

Where medicine is actually necessary, the operation of it should be as gentle, and the administration of it as sparing, as the nature of the case will admit; the best constitution may be shattered by using violence in the cure of a disease, and the strongest stomach

Stomach may be loaded with physic till it's virtues and efficacy are lost. We would also prefer small doses repeated more frequently, to large quantities with long intervals; because we are of opinion, that in the latter case the medicine frequently passes off without making any considerable impression, and the disorder gains ground before the arrival of the regular period of repetition; whilst the more constant use of it in smaller proportions, will at least keep the disease under, and by degrees answer all the purposes intended by the more copious prescription.

And lastly, we beg leave to admonish our readers to avoid the dangerous rocks of *experiment*. Our endeavours tend to establish plain rules, useful regulations, and simple, as well as gentle prescriptions. In the use and application of all these, we trust they cannot err; but if they should venture to leave the paths we have marked out, and pursue courses of their own, we can only warn them of the consequences, without being in the smallest degree answerable for them.

C H A P. III.

Of the Small-Pox.

OF all the diseases to which we are liable, perhaps there is no one so universally and with so much reason dreaded, as the *small-pox*. The havock it makes in the destruction of the human species; the ravages it commits on beauty; the injuries offered by it to the organs and faculties of sense; and the deformities, defects, and disorders, so frequently left behind it; operate so powerfully on the mind of man, that resolution itself shrinks from it's approach, and even philosophy shudders at the first alarm of infection.

Whether the first principles of this disease lie hidden and inactive in the human frame till they are called forth to action, and the flame lighted up by the spark of infection; or whether it arises immediately from the poison communicated operating in a peculiar manner on the mass of blood; is an enquiry that might prove amusing to a curious investigator, but to our present purpose would be equally uninteresting and unavailing. Certain it is, that there is not the smallest reason to suspect that it has ever appeared without previous infection; and

equally certain, that some pre-disposition to receive that infection is absolutely necessary to the production of the disease; because a thousand instances have occurred, where the same subject hath been repeatedly exposed to the contagion without the smallest effect, and yet has afterwards received the infection from a much more slight and distant communication with the diseased.

That the small-pox is not a native disease of this island, is universally admitted; but the particular time and manner of it's importation, though frequently discussed, still continues a subject of dispute.

We have classed this disease among those incident to childhood or youth, because in these seasons the human body appears from experience to be most liable to it; whether from any peculiar disposition to receive the infection, or from what other cause, remains yet to be determined.

The small-pox is distinguished by two different names; the *distinct*, and the *confluent*: each denomination descriptive of the kind it denotes.

The approach of both sorts is preceded
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by similar symptoms: the first of which is generally unusual weariness and disinclination to motion; then follow shiverings succeeded by violent heats, thirst, pains in the head, back, and all the limbs; and, more particularly in grown persons, a disposition to sweat, pains at the pit of the stomach, sickness, inclination to vomit, offensive breath, a disagreeable taste in the mouth, heaviness, and inclination to sleep, which is generally accompanied with restlessness and uneasiness, and disturbed with startings and dreams of horror; and immediately before the appearance of the eruption, children and persons of very delicate constitutions are frequently subject to convulsions; which last were formerly considered as very favourable prognostics, but have by some ingenious modern practitioners been spoken of in a very different light; the former notion prevailing from an idea that these fits served to *break the fever*, and the latter opinion arising from a well-grounded supposition that they were only indications of a strong and violent one: an opinion supported by proofs, that they have in some instances proved fatal, and in others have so weakened the patient, that he has been unable to maintain the conflict with this powerful and painful disease.

It has also been held, that some judgment might be formed from the greater or lesser violence of the preceding symptoms, what sort of small-pox would follow; and from the same observations, pretences were made to prognosticate with what degree of severity the disease would appear; but these doctrines have been also exploded, daily experience convincing us, that the most favourable sort sometimes follow very aggravated complaints, and that the confluent and most malignant kind in some instances succeed much more moderate and less alarming symptoms.

This disease has been divided into four, but more commonly into three periods, each attended with a fever of a different

kind: the first is the nervous, and accompanies the efforts of nature to separate the infected matter from the blood, and throw it out on the surface of the skin; the second is of the ardent or burning kind, which appears during the maturation or ripening of the eruption, and which is commonly called the secondary fever; and the third, which is occasioned by a return of the diseased matter into the blood, and is therefore more or less putrid.

The appearance and progress of the small-pox, (which is undoubtedly a disease of its own kind, and perfectly distinct from all others) is for the most part as follows. In the mild and favourable sort, the pustules will begin to appear on the fourth or fifth day from the first illness, when the preceding symptoms will abate, and the disease will shew itself in small spots of a pale red, sprinkled here and there over the face, neck, and breast, which are the parts in general first affected; and at this period a sweating, which the strictest attention to keeping the patient cool will hardly prevent, commences, and frequently continues till the pustules begin to ripen, when it disappears naturally. On the second day, these spots begin to be visible in a more distinct form in different parts of the body; and from this time they rise and fill with a thick digested matter of a white colour, which changes to yellow about the ninth, tenth, or eleventh day; after which they will form into crusts, or scabs, and gradually fall off, the intermediate spaces of skin between the pustules appearing during the progress of a lively red, which continues even after the eruptions have disappeared.

As the pustules increase in quantity and size, the throat is frequently affected with soreness, and the eye lids are sometimes so charged with eruptions and distended with the swelling, that the patient becomes blind; and this swelling extends not only over the whole head, but even to the hands, fingers, and feet, and is proportioned to the quantity

tity of eruption; but this is by no means an unfavourable symptom, and it abates as soon as the pustules are arrived at the full size and ripeness, and goes off, as it first appeared, by degrees.

The regular declension or going off of this disease, is marked by the falling of the face and change of colour in the pustules there, in the first place, whilst those in other parts continue full and large. An alteration is next discovered in the hands and fingers, and the change follows over the other parts of the body; on the fingers and hands there is seldom or ever any scurf, or scaly matter, but the bursting of the pock finishes the process.

The confluent or malignant small-pox has also the same symptoms as the distinct and favourable sort; but the eruption appears generally a day or two earlier, after the beginning of illness; and instead of the sweating, it is frequently accompanied by a looseness: the sooner the pustules break through the skin, the greater apprehension there is that they will run together. This sort seldom comes out later than the third day, except in cases attended by very extraordinary symptoms; such as acute pains in the loins or side, violent rheumatic aches in the limbs, and uncommon pains in the stomach, occasioning sickness and vomiting; and when the eruption is delayed by such complaints, much danger may be apprehended.

Nor do the symptoms, as in the distinct sort, vanish on the appearance of the eruption; on the contrary, they continue with great severity, and frequently for many days after this event. In the first stage, the spots are hardly to be distinguished, but by the time of coming out, and the preceding symptoms, from the measles; after a time, they join or run together, and resemble a red bladder, which covers the whole face, occasioning an earlier swelling than the distinct sort; and as the distemper advances, the whole surface of the face appears as if a

thin white skin was stretched tightly over it: from the eighth day, or thereabout, this skin becomes more rough to the touch, and changes to a dark brown, instead of a yellow colour, as in the milder sort: and this roughness and alteration of colour increases, until the superficial skin cracks and falls off, which does not sometimes happen, where the disease has been of the worst kind, till towards the twentieth day; when the skin beneath appears at first smooth, but is soon covered with scales, of so corrosive a quality, as not only to occasion pits, scars, and even seams, but in some very bad cases to strip off the skin of the back and shoulders, leaving the flesh bare, and producing actual sores.

There are also certain circumstances peculiar to this kind of small-pox; in particular it may be observed, that the eruptions are of a larger sort on the hands and feet than on any other part of the body, and that the appearance of the pustules is generally accompanied by a spitting approaching to salivation in grown persons, and by a looseness in infants and children. The spitting is at first in great quantities, and easily discharged; but towards the tenth or eleventh days, the matter grows tough and glutinous, and is brought off with extreme difficulty; and about this period of the disease, the spitting stops, and very seldom returns, though some such instances have occurred; and when this discharge ceases, an abatement in the swelling of the face, and an increase of it in the hands, are very favourable appearances.

The looseness does not attack children at so early a stage of the disorder as the spitting; but unless a stop is put to it by medicine, it continues during the whole progress of it.

Upon the whole, when the pustules appear distinctly, slowly, and gradually; when they increase in height and size, and as well as the intermediate skin, preserve a proper colour; when the swelling commences and goes off gradually; and when the

the several fevers are moderate, and the change or ripening is effected without the intervention of any extraordinary symptom; this disease is of the most mild and favourable kind, and is seldom attended with any considerable degree of danger.

But when the whole surface of the face is covered with pustules; or when they are intermixed with dark, black, or purple spots or blotches; when a continual retention of urine, violent unintermitting pains in the head and eyes, and throbbings in the neck, indicate an increasing fever; when the swellings of the head and face fall before the eruption has arrived to ripeness; when a black slough or crust covers the tongue; when the patient, at the maturity of the pustules, is seized with shiverings, faintness, or violent palpitations; when there is a discharge of blood, either in the urine, or from the lungs, by expectoration or spitting: in either of these cases the patient is in imminent danger, and the most fatal consequences may be dreaded.

The introduction and very general use of *inoculation* has been productive of the most happy and advantageous changes, both in the management and medical treatment of the natural small-pox; and improvements which were suggested by very eminent physicians of the last century, but which they were themselves afraid to adopt, in contradiction to the current of opinion and custom, which at that time set so strongly against these salutary discoveries, have been now universally received, and have conduced to the saving many thousands of lives, to the preservation of beauty and health, and to the rescuing from terror, distress, and the most poignant anguish, those susceptible hearts, who, for themselves or others, lived in the continual apprehension of a disease which threatened death, deformity, and mutilation.

Till these improvements were admitted, it is hardly possible to describe the havoc made by this pestilential disease; but if we

look back to the practice which preceded them, we shall find the wretched victims of infection confined to close beds in rooms still more confined, and whole families crowded together, and condemned to submit to suffocation, in the noxious fumes and intolerable stench, which were emitted from bodies in an increasing state of putrefaction.

We shall find them loaded with medicines, oppressed with external heat, and inflamed with cordials and stimulating mixtures, sinking under an unnecessary and acquired burden of eruption; and a new and additional distemper constituted by the surrounding filth of dirty linen and saturated bed-cloaths.

We shall find an alarm sounded the moment the first symptoms appeared, and the various operations of blistering, bleeding, and purging, performed, before a single eruption had broke forth; to the total derangement of all the efforts of nature, and to the reducing the patient to such a degree of weakness, as to render him very unfit to stand the shock of the disease which he was destined to endure.

Hence the mortality which almost constantly marked the progress of this baneful distemper; and hence the numberless miserable objects of deformity which excited our compassion, and increased our horrors, at the approach of the fatal cause of them.

But from these melancholy scenes we may now happily turn, our eyes; more pleasing prospects present themselves; we can expect the small-pox without the agonies of apprehension, and mark it's progress without being subject to the horrors of despair.

A tribute of gratitude is due to those who first engaged themselves in the communication of those important and interesting discoveries; and still more are we indebted to him, who has not only improved these arts of preservation to the highest pitch of excellence, but with peculiar liberality

berality and generosity, has promulgated his knowledge upon the purest principles of benevolence, and afforded the world an opportunity of profiting by his labours, ingenuity, and experience.

As we mean, in some measure, to avail ourselves of these publications, and to add to the practice which has fallen to our share the many admirable directions and opinions of all the most celebrated inoculators, in a distinct chapter; and as those who labour un-

der the distemper in the natural way, will receive the utmost benefit by treatment similar to that of persons taking the infection by inoculation, we shall refer our readers to our chapter on that particular subject, where they will find rules for the management of persons in this distemper, which as far as human wisdom extends, may be deemed almost infallible, and prescriptions which have been used and approved with repeated and unvaried success.

C H A P. IV.

Of the Measles, Chicken-Pox, and Swines-Pox.

THE measles, as well as the small-pox, is said to have been imported into Europe from Asia, and both disorders are reputed to have made their appearance in these climates about the same time.

Persons of all ages are liable to this disease; but as children are more peculiarly subject to it's attacks, we have thought it right to treat of it in this place.

Very ingenious physicians have determined this distemper to be rather an inflammation of the lungs, and the eruptions to be considered as mere symptoms of that disorder; and have supported this opinion by an observation, that the cough, pains in the breast, and other complaints which precede the appearance of the measles, obtain no relief from the eruption, but accompany the disease through it's whole course, and frequently continue long after it disappears. Others, however, conceive, that it is an eruptive fever of it's own kind, and that the scarlet-fever is actually the measles in a confluent state; and the latter idea derives no small degree of credit, from the certainty that this distemper is infectious, and may unquestionably be communicated artificially.

That the air and seasons influence the spreading this disease, is evident from it's

being more commonly epidemic in large and populous cities, than in open villages or the country, where habitations are thinly scattered; and from it's being generally more prevailing in the spring of the year, than during the summer or in the autumn.

The approach of the measles is foretold by complaints, frequently differing in different constitutions. It is usually preceded by shiverings and hot fits, in alternate succession, by dulness and inclination to sleep, in children; and in grown persons, very violent and continued head aches, an universal restlessness, sore throat, every mark of inflammation in the eyes, accompanied with the emission of sharp scalding water, swollen eye-lids, and a disability to endure the light without sensations extremely painful; a constant defluxion from the nose, promoted by frequent sneezings, thirst, loss of appetite, a discoloured yet not dry tongue, sickness, an inclination to vomit, or more usually a looseness with green and foetid stools, sweating, a cough and suffocation: in some cases the cough, which is small, dry, and irritating, is the first symptom, and attacks the patient several days before any other indisposition appears.

The symptoms generally proceed with
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increasing violence till the fourth, or in some cases, though these do not often occur, till the fifth day, when the eruption begins to make it's appearance in small, round, red spots on the face, and thence spreading over the whole body in a sort of continued figure; for though many parts of the skin remain free from the eruption, yet it always appears joined together by a chain or string of pustules, by which circumstance it may in the early stages of it be distinguished from the small-pox; in some cases the breast and stomach are the first seats of the eruption.

As these spots spread and are enlarged, they are discovered to be composed of a number of small pimples set very near each other, and rising so very little above the surface, as to be more perceptible by the touch than to the sight; these inflammatory appearances occasion a swelling of the face, and in some instances actual blindness.

The appearance of the eruption makes but little alteration in the symptoms; the sickness and vomiting, indeed, generally cease, though the latter, of a bilious kind, sometimes takes place a day or two after the eruption, and is productive of relief in a considerable degree: but the head-ach, suffocation, fever, cough, and complaints in the eyes and throat, rather gain ground than diminish; unless, as it frequently happens, nature should make a vigorous effort towards their abatement, by a plentiful discharge of blood from the nose.

From the fifth day to the seventh, the forehead and face begin to grow rough from the drying up of the pustules; which, from thence to the ninth day, continue to peel off from the whole body in small scales, which have the appearance of bran; and by this time no external remains of the disease can be discovered but a trifling redness on the skin, which disappears in a day or two at farthest.

But the symptomatic complaints are not

so easily disposed of; on the contrary, they rather seem to act with redoubled vigour: the cough becomes more frequent, and disturbs the patient's rest by night as well as day, threatening an inflammation on the lungs, which too often proves fatal; the difficulty of breathing increases; and these unpromising symptoms, which are frequently occasioned by a regimen and medicines improperly warm, are followed by a looseness, which in many cases reduces the patient so low that his life is in imminent danger.

From the same cause, it happens in some instances that the spots assume a livid colour, and in others become quite black; appearances from whence the worst consequences may be apprehended.

If this disease is accompanied with an inclination to sweat moderately; if the body continue rather open than otherwise, but without shewing any tendency to a looseness; if the discharge of urine is considerable, and the various complaints in the head and eyes, the fever, and cough, decrease as the distemper advances; little danger need be apprehended from the measles themselves, or of their leaving any ill consequences behind them.

But if the fever and accompanying symptoms gain strength in the progress of the disease; if the spots should suddenly grow pale or livid, or totally disappear, and be succeeded by coldness of the extreme parts, restlessness, or delirium; if the patient should be afflicted with great difficulty of swallowing, excessive sweats, a violent propensity to vomit, or convulsion-fits; the utmost exertions will be required to produce a change in his favour.

Nor are the dangers attendant on this disease confined to the existence of it: if the head-ach continues with unabated violence through the whole progress of it, that species of blindness which is denominated the *gutta serena*, is not unfrequently the deplorable consequence; and unless nature directs

directs some critical evacuations, the fever very often outlives the distemper, and a continuance of the cough by this time become hectic, and attended by a hoarseness, awakens our suspicions of an approaching consumption of the lungs.

Through the whole course of this disorder, great attention should be paid to the regimen, which should be generally of the same cooling kind as will be hereafter recommended in the inoculated small-pox; but, except under particular circumstances, acids may be avoided, on account of the cough; nor, for the same reason, should the patient be indulged in the use of small-beer: whey, barley-water, balm-tea, decoction of the leaves and roots of the common mallow, or of marsh-mallows, and liquorice-root, linseed-tea, or any other diluting drinks, may be taken freely, sweetened with honey, or fine sugar, according to the state of the patient's body; the former being calculated to promote, the latter to restrain looseness. But the measles does not admit of the same freedom with respect to air and exposure as the small-pox; a sudden change, or a damp or cold air, will in the former frequently occasion very troublesome and obstinate pains in the breast, with a suppression of breath, approaching to asthma.

If the symptoms are at all severe, bleeding will be found necessary in the first stages of this disease, and must be repeated according to age and strength, whenever the continuance of the fever, suffocation, straitness across the breast, or other symptoms which seem to threaten inflammations of the lungs, appear in any degree to require it. Nor is this operation attended with danger in any state of the disease; though it will be prudent to omit bleeding where it proceeds mildly, and is not accompanied with unfavourable circumstances. Blistering also may be useful on the occurrence of violent symptoms.

The cough may be softened by a mixture

of spermaceti, or oil of almonds and sugar-candy; but the most effectual method to relieve both the cough and hoarseness with which it is frequently attended, is to receive the steams of warm water, or of tea made with any of the pectoral herbs, into the throat; and for this purpose the patient should hold his head over any narrow-mouthed vessel, about half full of such water or decoction, at least three or four times a day.

Gentle anodynes, such as syrup of poppies, or a small quantity (not exceeding a drop or two for a child) of laudanum, in a spoonful of any simple water, may be repeated every night after the eruption, in case of considerable restlessness or uneasiness from the cough; but these medicines should not be administered if the patient is tolerably easy, and his sleep undisturbed. Great care is at all times necessary to prevent costiveness, a tendency to which should be removed by frequent clysters.

In case of a sudden check or disappearance of the eruption, attended with sickness, faintness, and a low or irregular pulse, negus, or even wine and cordials, should be frequently taken, the body should be gently chafed with warm cloths, and blisters applied to the limbs. Warm plasters to the insides of the hands, and soles of the feet, or cataplasms of bread with mustard-seed or horse-radish, may also be tried in cases of emergency; and the immediate application of blisters is advised on the first appearance of convulsions, to which very young subjects are sometimes liable.

The bark may be given with advantage in almost every stage of this distemper, especially after the preparation of bleeding and opening the body; it relieves the cough, lessens the hoarseness, and prevents the advance of other disagreeable symptoms. It is of singular use in the appearance of purple or black spots, taken in substance from ten grains to thirty, in proportion to the patient's age, in a spoonful of any liquid; to which may be added a few drops of spi-

rit of vitriol. And as many, if not most of the alarming symptoms which attend the going off of the eruption, are occasioned by the return of the diseased matter into the blood, the bark, administered at this period of the disease, cannot fail to produce very happy effects. It may also be taken with great advantage accompanied by the spirit of vitriol, in case of any extraordinary discharge of blood from the nose, stomach, or bowels.

Purges are necessary after the measles, but by no means violent ones; nor should they in general be given till the eruptions have entirely disappeared; but gentle perspiration, during the wearing off of this disease, may in most cases be promoted with advantage.

Among the other disagreeable relics of this disorder, a looseness is not uncommon; and when it proceeds to such violence as to occasion considerable weakness, it should be cautiously checked, but by no means suddenly stopped: a few grains of rhubarb, which may be accompanied with a small quantity of saffron, and powder of crabs-eyes or oyster-shells, will in general answer the purpose effectually; but if these should happen to fail, the *cortex thuris*, or *elutheria*, may be added in small portions, and gentle opiates given at night; and when this complaint refuses to submit to medicine, bleeding will in most cases remove it.

Air and exercise are great assistants in the recovery from this disorder; but the former should never be taken during the prevalence of sharp or moist winds, which will aggravate the cough and endanger the lungs; nor should the latter be used in so violent a degree as to produce fatigue: a light diet, abstinence from flesh, weak and diluting liquors, and in cases of extraordinary weak-

ness, asses milk, will conduce to the re-establishment of the patient's health.

The *chicken-pox* and *swines-pox* differ so little from each other, and are attended with so little danger or difficulty of cure, that it is not necessary to treat of them separately. The only material distinction between these two diseases is, that the pimples or pustules of the latter are frequently of a larger size than the former; but this description does not apply in all cases.

The symptoms which precede these distempers, resemble those of the small-pox, but are much less violent, and of shorter duration; head-ach, heaviness, loss of appetite, and disinclination to use exercise, are generally followed by the appearance of the eruption in little more than twenty-four hours from the first indisposition. The pustules first appear red in the skin, but soon rise, become prominent, and fill with a watery fluid instead of matter; and but for this difference, these disorders so greatly resemble the small-pox, as to have been frequently mistaken for that disease; a mistake which may be productive of very fatal consequences, both in case of inoculating from them, and by persuading the patient that he has passed through that disorder, putting him off his guard, and leaving him exposed to take the infection in the natural way, at seasons and under circumstances which may occasion extreme danger.

All that seems necessary to conduct the patient through these diseases in safety, is to direct him to abstain from animal food, to drink plentifully of diluting liquors, to keep the body rather open during the progress of the disease, and to purge moderately after it goes off, which will generally be in four, five, or six days, from it's first appearance.

CHAP. V.

On Inoculation for the Small-Pox.

IF we received the first infection of this dangerous and loathsome disease from the East, we are indebted to the same quarter for a discovery which has disarmed the malady of it's terrors, blunted the edge of it's poison, and reduced the happy art of conducting the patient in safety through this once dreaded distemper to a moral certainty of success.

The practice of inoculation was first introduced into Great Britain by the communications of the ingenious and celebrated Lady Mary Wortley Montague, who acquired the knowledge of it during her residence at Constantinople with her husband, in his embassy from this court, from certain Armenian merchants engaged in the lucrative traffic of supplying the seraglios of the sultan with females; and the safety and certainty of this operation may be fairly inferred from it's being practised universally on the most valuable of their possessions, the most distinguished beauties which even incredible sums could purchase.

Lady Mary Wortley Montague's son having been successfully inoculated in the East, and her daughter soon after her return to England, the then royal family submitted to it under the care of Sir Hans Sloane, and all passed through the disease without a single alarming circumstance.

From this time the practice of it was frequent, but not considerable: it gained ground, but slowly; owing in some measure to the weakness of the human mind, but much more to certain conscientious prejudices entertained by many worthy religious and scrupulous persons, and strengthened by discourses from the pulpit and the press, fraught with arguments of it's irreligious tendency and probable temporal danger;

which, though every argument was immediately answered by sound reasoning, and the objections to inoculation refuted with equal ability and vivacity, yet the impressions in disfavour of it were too deep to be easily effaced, more especially as it's enemies were assisted by the natural and warrantable apprehensions of every individual for his friend, child, or relative.

In this state, and under this struggle with prejudice, misapprehension, and the want of experimental conviction, it is not surprizing that it's progress was comparatively slow; and that the benefit of a discovery so inestimable, was confined to a few in the upper circles of life, whose minds were more enlarged by education and reading, and who had better opportunities of acquiring information than the middle or lower classes of mankind.

To the discouragements already mentioned we may add, that the few publications on this subject were so truly professional, and so embarrassed and loaded with terms of art and technical expression, that without literary and medical exposition, they were wholly unintelligible, and left the ordinary reader either totally in the dark, or confounded and perplexed in labyrinths of art and learning.

But that spirit of enterprize and perseverance which so happily distinguishes the inhabitants of this island, began somewhat less than thirty years ago to surmount the difficulties, and remove the obstacles, which stood in the way of this most excellent discovery. About this time a whole medical family commenced inoculators upon plans of considerable improvement on the original art, and connecting themselves with practitioners in various parts of Great Britain,

tain, the practice was extended under the sanction of their names; and all ranks of people submitted to inoculation, under the persuasion, that they might venture to rely on that skill and management which had rendered these successful professors so very eminent.

About the same time another gentleman of the faculty devoted his time and attention to this salutary process; and having practised inoculation in a county bordering on the metropolis, with uninterrupted success for several years, was invited to the court of a great and rising nation, where he performed the operation on the possessor and successor of the throne, with honour to himself, and advantage to his royal patients; and this gentleman has also, with equal modesty, ingenuity, and liberality, communicated to the world his whole system of improvements, without reservation, in writings replete with candour, elegance, and perspicuity.

From these publications we have adopted, in our practice, many rules respecting regimen, treatment, and medicine; and as we have never found them in any one instance fallible, we shall recommend them to our readers with the most perfect confidence; and wherever we have ventured in the smallest degree to differ, we beg leave to declare, that we do not prefer our own opinion, but may have casually admitted some variation, in consequence of circumstances which may not have fallen under the observation of every practitioner of physic.

But as we have already hinted at our opinion of inoculation in a moral and religious light, it may not be improper to offer it more explicitly, and to add a few considerations on this practice as a matter of national policy.

Though we do not scruple to avow, that our judgment is decided in favour of the practice of inoculation; and though, for the general benefit of mankind, we do most

earnestly wish it may be universally received; though we are convinced by reason and experience, that the operation is safe, easy, and effectual; and though we are persuaded that a candid and dispassionate enquiry would produce the same conviction in the minds of all our readers; yet we do not pretend to argue against the feelings of nature, or to combat scruples of conscience. To those whose objection to inoculation takes place in the former, we will offer a few plain facts, which we trust will excite feelings of another kind, and direct them to the happiest issue.

Inoculation was introduced, from observing the practice of men, who risked their whole property, and frequently their lives, on the success of it.

It has made its way through numberless difficulties and violent opposition, and having surmounted both by success alone, is now received with general approbation.

The bills of mortality will on comparison prove, that since the introduction of inoculation, the fatality of the small-pox generally has lessened in a very large proportion.

Registers, and lists, which have been kept in various parts of the kingdom, will shew, that very few lives in the whole have been lost under inoculation; and that the modern improvements have reduced the success of it to a moral certainty.

That various operations, conducive to the preservation of life, though with much less probability of proving effectual, are in daily and hourly practice; such as amputations, cutting for the stone, &c. Nor do we apprehend, that when probable death is the alternative, objections would be considered as proofs of tenderness or affection.

To those whose objections arise from religious or conscientious doubts of its moral rectitude, still fewer arguments will be required; because such minds will not be affected with prejudice, or possessed with obstinacy:

obstinacy: it will only be necessary to satisfy them, that the practice of inoculation is neither inconsistent with our duty to God, our neighbour, or ourselves, and the objections of such well-disposed persons will vanish of course.

The all-powerful and merciful Author of our being, has mixed in the cup of life bitter and sweet: but he has furnished us with means, in many instances, to separate the ingredients; nor has he compelled us in any case to swallow the potion, without using those means to render it palatable.

In fractures, ulcers, mortifications, and gangrenes, where amputation can alone prevent certain death, is the performance of this operation considered as an unwarrantable interruption of the decrees of Providence; or does any divine or moral precept instruct us to prefer the greater danger of the disease, to the lesser one which may possibly attend the attempt to cure?

Can it be consistently urged, that the exertion of self preservation against the pains and mortality of an acute disease, is either derogatory to the honour of God, or inconsistent to his Divine will?

Let the man of conscience discuss these questions religiously, and few doubts will remain, but what will be immediately obviated by the same consideration which has been held the strongest argument for the truth of the Christian religion. That the progress and success of inoculation, under great disadvantages, and against the united efforts of custom and prejudice, has incontrovertibly proved, that this practice, far from being displeasing to our Almighty Protector, originated in his goodness, and has been promulgated by his dispensation.

In a public and political view, the advantages resulting from this operation are sufficiently obvious from the calculations above referred to. Population is the great sinew of a state; to which *preservation*, as well as *procreation*, must contribute: a thousand lives saved, are a thousand lives

gained to the community, and a proportionable addition to it's riches and safety.

That thousands of lives are annually saved in these kingdoms by inoculation, is beyond the possibility of question; that many thousands more might be in like manner preserved by rendering it universally extensive, is a proposition too evident to be contended: and we submit to those patriotic members of the legislature, who have exerted great powers of ability in providing for the health and comfort of their fellow-citizens, in a variety of instances, whether the establishment of some general and national plan, for the purpose of enabling all ranks and conditions of people to avail themselves of this life-preserving discovery, might not be attended with the most advantageous consequences, and executed at a very moderate, if not at a trifling expence.

Under the improved methods of *inoculation*, little objection is made to the age or constitution of the patient, or to the season of the year in which the operation is performed.

As to the former, it seems to be the general opinion, that although many children under two years old have been inoculated with success, yet the safer way is to let them pass their teething; previous to, and during which, they are peculiarly subject to a variety of disorders; such as fevers, convulsions, and fluxes; which requiring management in some measure differing from the treatment of the small-pox, may occasion inconveniences: nor is it altogether reasonable to multiply disorders in frames so tender, as to run great hazard in getting through those which commonly attack them in the state of infancy; more especially as young subjects have usually a larger burden of pustules than those of a more advanced age, though they are less able to bear them.

To this may be added, the extreme difficulty of prevailing on children to swallow medicine of any kind, in the greatest emergency; and as an eruption heavier than usual,

usual, or other circumstances may occur, in which there may be an absolute necessity for administering physic, we may in such cases have the melancholy prospect of infants dying before us for want of that help, which, though at hand, we are utterly unable to afford them from this untoward circumstance: and the forcing medicine down their little throats, is attended with so much uncertainty, that no dependance can be placed on the quantity actually taken down and is productive of such dread and agitation in the patient, as frequently to occasion convulsion, and other deplorable consequences.

For these reasons, it seems more prudent to defer the operation till after the cutting the first teeth is compleated, as the delay is so short, and the risque of infants being exposed to natural infection not very imminent; but if, from situation, the necessity of removing them, or other circumstances, there is great probability of their being infected, recourse should be had to inoculation, as at every period of life attended with much less danger.

In the inoculation of children, attention is recommended to an observation, that those who, from the uncommon size of their heads, may be suspected of being afflicted with any degree of the hydrocephalus, or dropsy in the brain, have from experience been found improper subjects of inoculation; children labouring under this complaint, being always liable to a stupor or heaviness, which this operation hath in some instances been known to promote, though the disease of the small-pox hath proceeded with very favourable symptoms.

With these, and a few other exceptions hereafter pointed out, all ages, and even constitutions, have been inoculated with success; for, surprizing as it may appear, persons afflicted with habitual complaints of long standing, the gout, the scurvy, and the king's evil, the bloated and emaciated, the intemperate and debauched, have been

conducted through the disease without incurring the smallest symptom of danger.

But persons immediately labouring under acute or critical complaints, those who exhibit signs of sharp and corroding humours, or who from poverty of blood, or any other cause, are reduced to a great degree of weakness, will require such treatment as may remove those disorders, before they will be proper subjects of inoculation. Nor can it be recommended to constitutions liable to frequent returns of intermitting fevers. Women under the course of their periodical returns, and those with child, have been inoculated with success; but under these circumstances the operation is not adviseable.

The season of the year was formerly understood to be a matter of great importance in the determination on this operation; and it has been usual to wait for the milder seasons of spring or fall, however other circumstances might conspire to urge the immediate performance of it. But these particular seasons have been found less propitious than even the heats of summer, or the cold in winter; probably, because the food of winter may, on account of the smaller quantity of vegetables, fill the blood with grosser humours, and dispose the body to throw out a larger portion of eruption; and because the autumnal season is most commonly productive of agues, fluxes, and sore throats, from the humidity, or moisture of the air, which generally prevails about the latter equinox.

Indeed, the successful practice of admitting fresh air to patients in the small-pox, as an indispensable regulation, renders the season of the year when the disease is to be taken of very little consequence; it being at all times necessary to guard against too much warmth, even in the winter, and the heats of summer being never so intense in this country as not to be easily avoided by chusing an apartment with a northern aspect, which should always be attended

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to when this operation is performed in the midst of summer.

We are aware, that in treating so lightly the seasons of life, and of the year, in an undertaking of such importance, we differ very widely from some who have written on the subject a few years ago: with these, age, month, and even moon, were to be consulted with scrupulous exactness; nor was the smallest deviation allowed from rules of such weight and consideration; but it must be remembered, that inoculation was then only on the road to that perfection, to which from it's almost unvaried success it seems at present to have arrived.

Not but that some regard should be paid to circumstances of particular kinds: at whatever season of the year any epidemic distemper, such as the fever or sore throat, prevails, it will be proper to suspend our intentions to inoculate, whilst the possible occurrence of such a distemper may render the business we have in hand less manageable.

Preparation for inoculation hath till very lately been held to be indispensable; and though modern experience hath tended to lessen the cautions usual on that head, yet we do not conceive they are to be altogether rejected in regulating a regimen: perhaps little attention is necessary to such as are moderate in flesh, and enjoy perfect health; but where a very full habit indicates gross humours, or where the constitution, reduced too low, requires corroboration or strengthening, or where the stomach or bowels appear to abound with crude matter, some regulation may unquestionably be attended with advantage.

In the former case, a total or pretty general abstinence from animal food, or the juices, in broth; from cheese, and any considerable quantity of butter; from fermented liquors, except a moderate use of well-concocted small-beer; and from every kind of spice, or whatever else is of a heating nature; is certainly adviseable. The diet to

consist of fruit-pies, pudding, rice-milk, and other milk meats; sago, and roots, greens, and vegetables of all kinds, not excepting sallads; together with eggs and butter in the puddings and pye-crust, but not otherwise; tea, coffee, or milk-chocolate, for breakfast: and all to be taken in such moderate quantities, as not to offend or load the stomach.

The usual time of preparation is nine or ten days before the operation: and under the circumstances which render this preparation necessary, it will be proper for the patient to take, at equal distances, three doses of the following powder, which may be either swallowed in the form of pills, or made into a bolus with jelly or sweet-meats.

Calomel, sixteen grains—powder of crabs-claws, ten grains—golden sulphur of antimony, two third parts of a grain—emetick tartar, one quarter of a grain.

These must be carefully rubbed and mixed in a mortar; and the dose is from three to four grains for children, and from five to six grains for grown persons, to be taken the last thing at night, and to be purged off the following morning with Glauber's salts dissolved in warm water or gruel, and the quantity proportioned to the age and strength of the patient: on the days of purging it will be proper to refrain from eating vegetables.

But all that has been said of regimen and medicine should be applied only to habits of particular fullness or grossness; where there is no such appearance, and where there is no suspicion of bad humours or vitiated juices, no such preparation is at all necessary, nor any restrictions as to diet, till after the infection is actually applied.

In the evening of the day in which the inoculation hath been performed, a dose of the above powder may be given in quantity as before specified; and from this time the regulations concerning food should be

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carefully

carefully attended to, nor any deviation permitted, unless in cases and under circumstances which will hereafter be particularly noticed.

But among those who apply for inoculation, women of delicate and tender frames, and men of broken and shattered constitutions, those who are far advanced in years, and very young children (if circumstances demand their inoculation at an earlier period than we have before recommended) will require very different management; nor can any general rules for preparation be laid down to suit all constitutions, any more than any one remedy can be prescribed to cure all diseases: abstinence, and the use of mercurials, may be as injurious in one case, as they are beneficial in another; since it is equally dangerous to reduce the patient too low, and to give the small-pox without preparation, to an inflammatory, gross, or distempered person.

To such, therefore, as come within the descriptions of delicacy, tenderness, or debility, either from age or extreme infancy, medicines of a very mild sort only, if any at all, should be prescribed; and, in some cases, animal food of the lightest kind, and a glass of wine, should not only be permitted, but recommended. And in order to ascertain the necessity of preparation, and the nature and degree of it, particular enquiry should be made, and due consideration had, of the state of health of every individual offered for inoculation, as the sure means to prevent ill consequences from either the use, or omission, of mercurial medicines and low diet.

The communication of the small-pox by inoculation, hath been performed in a variety of ways; on the first introduction of the practice, large quantities of infected matter were applied on pledgets of lint or cotton, to numerous incisions of certain lengths, depths, and even forms; but this method being productive of disagreeable ulcers and sores on the parts, which continued to be

troublesome, and were sometimes found to be obstinate, long after the total disappearance of the disease, a thread moistened with the matter, by drawing it through a ripe pustule, was substituted, and being laid between the lips of the incision, was secured with a plaster; but this method producing the same inconveniences, though in a less degree, the following is now recommended, as liable to none of the objections of the former practices.

It having been long determined by experiments which leave no room for doubt, that if the patient receives infection naturally and artificially at the same time, or if the natural infection should even have preceded inoculation, but has yet occasioned no symptoms of approaching illness, that which is received by the wound, mingling with the blood at once, operates first, and destroys the disposition of the body to be affected by the natural taint; it will be advisable to perform the operation in the same house, or if convenient, in the same room, with the person from whom the matter is intended to be taken.

In how small a quantity matter sufficient to infect the whole mass of blood, in such a degree as to produce eruptions, may be conveyed into the body, remains yet undetermined; but a thousand cases may be adduced to prove, that a very small proportion of what was formerly used, will sufficiently answer every purpose; and if the poison, after it is received into the body, undergoes any favourable alteration in its quality before it mixes with the blood, which is by no means an improbable conjecture, the more modern method of inoculation must be on this account preferable.

The point of a lancet or needle being dipped in the fresh infected matter, either from a pustule, if in the natural way, or from the place of insertion if the person from whom it is taken is under inoculation, make a slight puncture or incision on the middle of each arm above the elbow, which
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may be just deep enough to pass the external skin, but need not draw blood (which is however no way material) and the instrument being introduced, let it be gently turned, and a slight pressure made with the finger towards the point of it, by which means some of the matter will be certainly wiped off, and left within the puncture, or scratch.

The infection thus introduced, no application of any kind should be made to the places where it is communicated, for either bandage or plaster are so far from being necessary, that they serve to prevent the certain discovery of the infection having taken place, which will shew itself by a degree of inflammation about the part; nor are these slight perforations of the outer skin, attended with the dangers of ulcers, sores, and mortifications, which were frequently occasioned by incisions and dressings.

But it is not of absolute necessity that the matter should be newly taken from the diseased person, it may be preserved for a considerable length of time on the lancet, or needle, and for a still longer, by placing a small quantity of the matter on a smooth plate of any hard substance, and after suffering it to dry, securing it from the air: and this matter, moistened by the steam of water, or a very small quantity of the water itself, when it is required to be used, will as effectually produce infection, as that which has been recently taken.

Nor does it appear to be in the smallest degree material, whether the infection be taken from a subject of inoculation, or from one diseased in the natural way, either may be indifferently used, and either will produce the same effects.

But as doubts have arisen with respect to the particular stage of the disease, at which the matter for infecting should be obtained, it may be necessary to remark, that the time generally pointed out for this purpose is during the continuance of the fever which accompanies the eruption;

though matter taken from the infected parts, even before the appearance of pustules on other parts of the body, may be used with equal success; and notwithstanding opinions have prevailed that the matter is not infectious till the pustule has arrived to a certain degree of ripeness, yet the present practice of inoculation has clearly proved, that as soon as any moisture can be taken from the infected part, it is perfectly capable of conveying the infection, and will as certainly produce the small-pox, as matter taken from pustules in full maturation.

The infection thus communicated, on the evening of the same day give a dose of the powder before described; and from this time let the regimen be particularly attended to. To grown persons it will be proper to give a small dose of Glauber's salts, or manna, and the infusion of senna, on the mornings following after the powders are taken; but unless the powders should fail to produce a stool or two, this will not be necessary for children.

The progress of the infection will appear in a small degree of inflammation about the punctured part, so slight at first as only to be discoverable by the help of a convex, or magnifying glass, and this frequently so early as the second day: on the fourth or fifth day the part will be somewhat hard to the touch, the inflammation will be more visible, attended with itching, and the immediate scratch or puncture will appear to be covered with a kind of thin skin, beneath which a small quantity of fluid will be discernable; the whole assuming the appearance of a burn.

About the sixth day a pain and stiffness is generally felt in the arm-pit; and this is considered as an agreeable symptom, foretelling the near approach of the eruption, and denoting a favourable progress of the disease: and at this time another dose of the powder may be administered, under the foregoing directions.

Sometimes on the seventh day, but more frequently

frequently on the eighth, the symptoms of the eruptive fever will begin to appear, such as slight remitting pains of the head and back; increased stiffness in the arm-pits; shiverings of short duration; and alternate heats, which continue, more or less, till the whole eruption is compleat. A very disagreeable taste in the mouth, and an offensive breath, are also usual symptoms about this time; and the body begins to emit a smell peculiar to this disorder, at the particular period of eruption: and to these symptoms may be added the appearance of the infected parts, where the inflammation now spreads fast, and the punctures generally appear, upon inspecting them through a glass, to be almost surrounded with small pustules, so close together, as to be in a manner confluent; and these pustules increase in size, and extend as the disease advances.

On the tenth or eleventh day an efflorescence or partial eruption, of a lively colour, surrounds the place of insertion, and frequently extends half way round the arm, but more commonly is about the size of a shilling; and being under the cuticle, or external skin, is neither perceptible by the touch, or painful. When this appearance accompanies the eruption of the small-pox, it is of a very pleasing nature, as it almost infallibly predicts a moderate quantity of pustules, the fever and every other disagreeable symptom soon subside, and all danger and difficulty are at an end.

At this stage of the disease it may be necessary to repeat the powder, in which case it should be given as usual at night; and on the following morning this laxative draught.

Infusion of senna, two ounces—manna, half an ounce—tincture of jalap, two drams.

But neither the former medicine, or this, will be necessary, unless the appearance of the eruptive symptoms is accompanied with

any particular degree of violence; and in that case these prescriptions are calculated for grown persons of robust habits and constitutions.

And here it may be necessary to repeat the remark, that although preparation by regimen and purging medicine may be necessary, in the habits last described, yet infants, children, and young people in perfect health, not remarkably gross or full of blood, will need few or none of these precautions; the single dose of the powder, administered the day on which the infection is communicated, will generally be very sufficient for such subjects, and in some cases even that may be dispensed with.

But circumstances occur which require a still more frequent repetition of the medicines; for it sometimes happens, that though the success of the operation is perceivable, yet the signs are weak, and not so perfect, as to prognosticate with certainty the more or less favourable event of the distemper; the colour about the puncture or scratch continuing rather pale than red, little inflammation, the lips of the wound flat, and neither extending, nor occasioning itching, or other disagreeable sensations; and even to the fifth and six day, appearances are in some instances so doubtful, as to leave room for suspicion that the infection has not taken place.

In this unpromising state, when the delay of the usual symptoms threatens unfavourable circumstances, either as to the quantity of the eruption or otherwise, it may be right to give the powder even every night, regard being always had to age and constitution; and in case it fails to operate by stool, an ounce of Glauber's salts, or the laxative draught already mentioned, on the succeeding mornings. By this means the inflammation may be forwarded, which is a very material object, as it may always be observed, that when the change in the appearance of the arm, and the eruptive

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complaints commence early, the progress of the disease will be mild and favourable; but where these symptoms advance more slowly, some troublesome or perplexing accidents may be apprehended.

The progress of the eruption is unquestionably the most interesting period of this distemper; and the management of the patient, according to the modern method, at this particular stage of it, differing so very widely from former practice, it will be requisite that the directions on this head should be plain and intelligible: that no necessary steps may be omitted for want of the resolution which follows perfect information, nor any hazardous experiments tried which may produce the dangers of the disease in attempting to avoid them.

When the symptoms of the eruptive fever begin to make their appearance, the patient is by no means to be confined to his bed, or even to his room; on the contrary, as soon as the purging medicine has operated (if it has been necessary to administer it) let him keep abroad in the open air, nor shrink from it, however disagreeable; being equally cautious not to stand still, and to avoid the contrary extreme of violent exercise; and if he is troubled with thirst, let him quench it in draughts of cold water.

Harsh and adventurous as this treatment may at first sight appear, the salutary effects of it have been so confirmed by the experience of uninterrupted success in the practice, that it admits of few exceptions: and even in cases where the eruptive symptoms have been aggravated, and the patients extremely disinclined to any degree of motion, they have been prevailed on to leave their beds; and after being led into the air, and having drank plentifully of cold water, have experienced a return of spirits and appetite; and having rested well, gentle sweats have been succeeded by moderate eruptions, the fevers have abated, and all their disagreeable complaints have vanished.

But in general the eruptive symptoms are so very light as to produce no disinclination in the patient to this part of the regimen; on the contrary, he neither experiences depression of spirits, loss of appetite, or want of sleep: a few pustules appear pretty equally dispersed over his body, which gradually ripen as the inflammation spreads about the punctures, and these are also surrounded by eruptions which advance to maturity with the rest; and the disorder proceeds and goes off without the intervention of a single alarming circumstance, and almost without the sensations of pain or indisposition. During such a progress of the disease, the enjoyment of cool air supplies the place of medicine; or should any particular languor or faintness happen, a glass of wine or a small quantity of weak broth may be admitted in the day, or a little white-wine whey going to bed; and these indulgences may perhaps be more frequently necessary to persons of tender or debilitated constitutions.

By the regimen above prescribed, and the alterative purging medicines and cool air at the period of eruption, terrifying symptoms, and large quantities of pustules, are in most cases avoided: and certain it is, that those who are most inclined to keep abroad, conforming in all other respects to the regulations laid down, generally pass through the disease more easily than those who confine themselves within doors; and are in general so sensible of the benefit they derive from the air, as to solicit others in the same situation, rather to submit to it at first as a hardship, than to forfeit the advantages with which the use of it will be certainly attended.

As soon as the maturation or ripening is completed, and no farther apprehension remains of danger from the disease, the course of diet may be altered to one somewhat more generous: boiled meats, such as chicken, mutton, or veal, may be allowed in small portions; but particu-

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lar caution should be used in the return to the ordinary quantities of animal food; and some restraint will be necessary for a certain time, both with respect to this kind of diet and the use of fermented liquors.

If the parts where the infection was received should not compleatly heal up, at the time the scabs of the pock fall off, but should continue to discharge matter after that event; this appearance is occasioned by some peculiarity in the habit, which should be removed by gentle purgatives and alteratives, the wounds being in the mean time covered from the air, and the inconvenience which may arise from the adherence of the linen prevented by a plaster of white cerate, or any other inoffensive ointment.

Having described the whole progress of the small-pox by inoculation, and given rules for preparation, regimen, medicine, and management, in the ordinary course of the disease; it will be necessary to direct our consideration to such deviations and unusual symptoms as may occasion embarrassment, difficulty, and apprehension of danger; and to point out the means suggested by reason, and supported by experience, for the removal of these symptoms, and of the doubts which may arise respecting the event.

A violent sickness, accompanied with vomiting sometimes, though not very frequently, comes on about the commencement and progress of the eruptive stage of this distemper; and to get rid of this complaint, the stomach should be immediately cleared, and the vomiting promoted, either by drinking plentifully of warm liquids, or by giving to grown persons—

One grain of emetic tartar, carefully mixed with ten grains of the common powder of crabs-claws.

Lessening the dose proportionably for children, or persons of tender, delicate, or reduced habits.

If this medicine discharges the bilious matter, occasions stools, or produces a gentle sweat, relief will immediately follow; if, however, it should fail to procure stools, and the sickness continues, a little opening physic will in most cases abate the complaint, and the appearance of the eruption remove it entirely.

Another deviation from the usual symptoms, and which sometimes alarms us as the eruption approaches, is a kind of erysipelas or rash; frequently, though not constantly accompanied with sickness. When this appearance is only partial, in spots or patches on different parts of the skin, it soon goes off, and need not occasion much concern.

But this rash is sometimes so universal over the whole surface of the skin, and appears so mixed with the small-pox in the earliest state of eruption, and so much resembles the confluent malignant kind, even in being accompanied with red and purple spots, that the closest inspection with glasses has proved ineffectual to distinguish it, and the difference hath only been discovered by a strict attention to the concomitant symptoms.

In the rash of which we speak, neither the restlessness, pain of the head or loins, or the loss of strength, are so considerable as in the confluent small-pox, when attended with the malignant appearances of putridity; and upon a very close examination, the small-pox may be distinguished from the rash, in scattered pustules, differing from the rest in size. In every case of this sort, it will be necessary to keep within doors, but not in bed; to refrain from the use of water, or any thing else cold; and if any sickness remains, somewhat cordial, but not strong, such as white-wine whey, or weak negus, may be given; and this treatment will most probably prevent the complaint from becoming alarming: in two or three days the colour of that part of the skin which is covered by the rash turns dusky, but the pustules

pustules of the small-pox preserve their florid appearance, and advance properly without farther inconvenience from this eruption.

From the disappearance of this rash, as before described, pretences have been made to discharge a considerable part of the eruption of the actual small-pox by specific medicines, and to limit the number of the pustules that shall remain, at the will of the medical attendant: but the fact is, that the small-pox, after it has once appeared, will never be partially removed; that the pretence has taken rise from the natural going off of the rash, and may be productive of very dangerous consequences, if the patient should be induced to venture into the cold air, by which this eruption may be suddenly repelled, and the bad effects may be very sensibly felt, either immediately, or in the future progress of the disease. It is no very uncommon case, for the same kind of rash to appear even before the infection hath been communicated, and whilst the patient is under preparation; to which, and the medicines, it may probably be at that time owing; but whatever be the then cause of it's appearance, it seldom fails to return about the time of eruption.

Though the approach of the eruptive symptoms happens in general about the period already mentioned, yet this is a matter which is not always to be depended upon; in some instances, the distance from the time of communicating the infection is considerably shortened, and in others protracted, even days beyond the usual expectation.

In the former case, the part where the inoculation has been performed will exhibit certain signs of infection, and the puncture or scratch will appear inflamed and elevated on the third, or even the very next day after the operation; and this symptom will sometimes be accompanied with some other of the following complaints: shiverings, itching, and a trifling pain in the part, or sometimes on the shoulder; drowsiness, a

slight head-ach, and giddiness. In some, these symptoms are attended with a feverish heat; from which, however, others are perfectly free; and on the whole, the indisposition is not unfrequently compared, by the patients themselves, to the effects of intemperance or a slight cold, and seldom lasts twenty-four hours, or increases to such a degree as to require confinement. At the time of these complaints, the inflammation of the arms advances rapidly, and the parts become hard to the touch; but as the symptoms abate, the inflammatory appearances decrease also; the skin changes from a red to a livid colour, the punctured parts dry up in common scabs, and within the space of a week the whole affair is over.

Nor is the want of other eruptions peculiar to cases where the symptoms have been brought on so suddenly: when the approach of them hath been at the usual distance from the time of giving the infection, that is to say, on the seventh or eighth day, the expected appearance of pustules has failed, and the disorder has gone off as described in the former case. And in both, a few abortive eruptions will sometimes appear, most probably in consequence of inoculation; yet they differ from the true pock, and never arrive to any state of maturation; and at the end of two, three, or four days, dry away, without leaving any marks behind them.

On the first occurrence of such subjects, doubts arose, whether the infection had performed it's office sufficiently to secure the patient from the danger of being attacked by the disease in future; and in order to ascertain the fact, experiments have been made of inoculating again persons who had passed through the disease without any eruptions, or without any such as ripened in the regular way, and of exposing them to infection by a communication with the diseased; and the result of these experiments hath been, that though the wound-

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ed part (in case of second inoculation) hath commonly appeared inflamed for a day or two, yet no symptom of disorder hath followed, nor hath the exposure to natural infection been attended with any consequence whatever. From whence these two satisfactory conclusions may very fairly be drawn; that the deficiency of eruption has not been owing to the patient's having passed through the small-pox unobserved in some former part of his life; and that inoculation, attended with the usual symptoms, without any other eruptions than those which occasion the inflammation about the part inoculated, will as effectually secure the patient from future danger of this disease, as if the infection had produced the usual or any quantity of pustules.

It may also be proper to mention another irregularity which is sometimes observable in the course of this disease, as produced from inoculation; which is, that when the fever and other symptoms of eruption are in a great measure gone off, and even after the appearance of such a number of pustules, as that the eruptive stage of the disorder seems compleat, fresh eruptions will appear, and continue to come out for several successive days; and the appearance of these new pustules is in some cases, though not frequently, accompanied with a head-ach, but no other complaint; and they generally die away soon after their coming out, and rarely or ever arrive at maturity. But certain very particular instances have happened, where this second crop hath been preceded by a smart fever, and other symptoms of illness, and the pustules have even exceeded the first eruption in number, and have remained and ripened in the regular time.

But no pretence can be taken from these singular cases, to suggest the possibility of inoculated persons being liable to have the small-pox a second time; because even where these second eruptions have appeared, the whole process of the disease hath

been compleated within the usual time from inoculation, during the continuance of the inflammation on the inoculated parts, and in a shorter space than would have been expected from infection taken in the natural way: so that these distinct appearances of pustules have most probably been occasioned by the patient's having been kept low and cool in the first period of the disease, and that regimen having been remitted from an apprehension that the eruption was compleat.

It has also sometimes happened, that though the symptoms have been favourable, the process regular, and the pustules few in number; yet after the eruption, and when all apprehension was over, the patient has been alarmed with a severe attack of the fever, an uncommon degree of restlessness, and in children, who are unable to express their complaint, such fits of crying as to betray evident tokens of extreme pain: these symptoms are discovered to originate from pustules on the inside of the mouth, the internal skin of the nose, or in the gullet or throat; and as these complaints arise from a swelling or tension of the parts, occasioned by the earlier ripening of the eruption, where it is kept constantly hot and moist, so any little cordial sufficient to produce a slight perspiration, will in most cases remove them within twenty-four hours.

There are also cases in which it will be necessary to relax considerably from the severity of the regimen, both with regard to diet and air; for though the open air and evacuations are absolutely necessary, when a considerable degree of fever, or other alarming symptoms, indicate the probability of a great or unfavourable eruption, yet such treatment is not required, at least not in the same degree, where the complaints are less violent, or the patient of a more tender frame or delicate constitution; and should in some such cases be entirely dispensed with, if any apprehensions occur that the exposure may affect the patient too severely.

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Nor is the adherence to a very cold regimen so indispensibly necessary after the completion of the eruption; on the contrary, it may in many cases be attended with danger, and where the pustules are extremely numerous (which no art or precaution will in some instances prevent) it may be necessary for the ease of the patient that he should be confined to his chamber; for however devoid of danger the case may be, and however distinct the pustules, yet they will altogether occasion much soreness and pain, and disqualify the patient from enduring the fatigue of motion.

But under these circumstances, care must be taken that the room to which the patient is confined is not kept too *hot*, nor should it in any case exceed moderate warmth; for the change of air from a hot to even a cool and airy room will be attended with danger, and should be very attentively avoided.

In the inoculated small-pox it sometimes happens, that a considerable fever remains after the eruption, the skin seems stretched and painful, and the throat becomes so sore as to occasion difficulty in swallowing; in such cases a blister-plaster has been recommended to be applied on the punctures or incisions, which are generally the principal seats of complaint, being surrounded by a cluster of pustules, frequently confluent, and occasioning some swelling or straitness of the skin, and inflammation; a discharge, therefore, of the acrid matter from this source of the whole disease, seems the obvious method of procuring relief. The blister may be about the size of a crown-piece, or less, according to the extent of the inflammation, and may be composed of—

Powdered cantharides, or Spanish flies—and common yellow basilicon.

The plaster should be laid on soft linen cloth, and the edges of it prepared to adhere, by being spread with the common sticking-plaster, so that the blister may be

prevented from slipping, or being rubbed off from the part, in the patient's sleep; but the immediate incision or puncture should be covered with a dossil of lint or cotton, before the blister-plaster is laid on, which should remain about twelve hours, and then be removed and dressed with yellow basilicon spread on a pledget of lint, and the whole covered with a plaster of the following cerate; the prescription for which is given, as not only making the best plaster for dressing blisters, but in other cases an innocent healing salve or ointment, and very proper to be applied as the exterior dressing of many other wounds and ulcers.

Take of olive-oil, half a pound—yellow wax and prepared calamy, of each a quarter of a pound. Melt the wax with the oil, and as soon as the mixture begins to congeal, sprinkle in the calamy, and stir well till the whole is quite cold. This is the common Turner's cerate, and called in the London Dispensatory, cerate epulotic.

Though this method of applying blisters in the inoculated small-pox hath not been usually practised, yet it hath been so frequently tried of late, and hath so constantly been attended with speedy and effectual relief, that it ought to be recommended to general use on such occasions, blisters on other parts of the body being much more troublesome and less efficacious; besides, that the little additional pain which follows blistering the part already sore and inflamed, is no considerable object, with children more especially: nor does the blistering protract the healing of the incisions; on the contrary, it hath been remarked, that those which have been blistered are generally whole before others to which no application hath been made.

To what has been said of variations, symptoms, and effects, in the inoculated small-pox, may be added, that in some cases, but particularly those of children, though the eruption hath been moderate, and

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the pustules of a good kind, yet very early in the disease the inoculated parts have been highly inflamed, and have occasioned restlessness, and even a degree of fever; whenever this happens, a common poultice of bread and milk will remove the complaint with certainty.

If a treatment so very different from that which prevailed so many years, even after the introduction of inoculation, has occasioned some alarm, and excited doubts and apprehension, it will cease to be matter of astonishment, when we reflect, that until within a very few years, it was universally thought right to promote the efforts of nature in throwing out the eruption, by lying in bed in most cases where any degree of fever or other violent symptoms appeared; and even where they were most moderate, by strict confinement to a bed-chamber; and that the modern practice enjoins cool air, cold drink, and evacuations, in every case unattended with very particular circumstances.

Yet experience hath stamped the highest marks of preference on the method of management last mentioned; uninterrupted success in the disease itself hath confirmed it's utility, and the consequences have been of a nature so highly advantageous, as to obviate one of the principal grounds on which the objections to inoculation have been founded.

Common, and frequently well-founded complaints were made, that the old method of inoculating exposed the patients, (children in particular) however mildly they had been treated by the disease itself, to future consequences, attendant on this manner of producing the distemper, dangerous in their natures, and alarming in their effects; that they were often subject afterwards to abscesses in the arm-pits, tedious inflammations in the eyes, and loathsome and obstinate ulcers at the places of inoculation; and these unfavourable appearances have been represented as the natural and probable

consequences of unnaturally introducing a disease into the body, at a time when it might not be properly disposed to receive it, and occasioning a change, in all likelihood for the worse, in the patient's whole habit and constitution. And by such arguments, strengthened and corroborated by unquestioned proofs, that such cases as above described very often occurred, many sensible and candid persons were deterred from inoculation, under an idea, that by submitting to it they might incur the danger of worse evils than those they sought to avoid.

But on the strictest enquiry into the condition of those who have passed through inoculation under the modern treatment and management, scarce an instance can be found, (it may be very fairly said, not one in a thousand) where the smallest inconvenience hath followed this disease; and in the very few cases of subsequent indisposition, the complaints have, without exception, either originated in some disorder existing before the communication of the infection, or were of those kinds which so often succeed the natural small-pox; such as little breakings out, or trifling boils, which have always yielded to a slight dose or two of purging physic.

Under the modern practice, the inoculated part itself is less subject to those troublesome and disagreeable consequences so commonly attendant on the old method; in general, the punctures keep pace with the disease in progress, maturity, and disappearance, and it very rarely happens that any thing like a sore hath remained after the small-pox hath dried up and gone off: whereas the size and depth of the incisions in the old method, the quantities of matter, and the chirurgical dressings applied, very often occasioned disagreeable and obstinate discharges, sloughs, and other unfavourable appearances, which continued to teize and perplex the patient and his attendants for weeks (nay, in some particular

cular instances, months) after every trace of the distemper had been worn out and effaced.

Nor is the present management less effectual in the prevention of a complaint so usual after the former practice of inoculation, as to have excited terrors in those who were otherwise well inclined to the operation, and to have introduced very alarming apprehensions. Few patients escaped without being more or less affected by inflammations in the eyes, and that not only in the course of the disease, but for so long a time after, as to create very justifiable fears for the safety of those invaluable organs; but under the cool regimen, such effects are scarce ever discoverable at all, and where they are, in so very slight a degree as not to require the smallest assistance of art. A pustule very near the eye will sometimes occasion a tension, and in consequence, an inflammatory appearance; but the departure of the pock removing the cause, the effect follows of course.

Most certain it is, that the cool and repellent regimen now advised, is replete with all the advantages of the former method of treatment, with the addition of many others which have been already enumerated; that it is liable to none of the inconvenient and disagreeable consequences so generally complained of whilst the latter management prevailed; and that, as the practice of inoculation now stands, candour must allow, that though it is not to be expected that the operation should carry off old disorders, yet it neither introduces or leaves behind it any new ones; and that many instances have occurred, where constitutions have received much benefit from passing through the small-pox under the present methods of treatment, but no single one can be produced where it has occasioned the smallest change for the worse.

Having very copiously discussed the subject of inoculation in the preparation, operation, process, and effects, and I trust

very fully established the safety and expediency of the modern treatment and management; it remains for us to perform our engagement made in a preceding chapter, and to consider how far generally, or in what cases in particular, the cool and repellent regimen, and the whole modern method, or any part of it, may be applied with probability or hope of success, when the small-pox is produced from infection taken in the natural way.

And here it will be necessary to observe, that the opportunities of making experiments, and of acquiring from experience that degree of knowledge which can only arrive to any kind of certainty, are not only much less frequent in the cases now before us, than in those which arise from inoculation, but the judgment formed from them is much more indeterminate and inconclusive; because in the former, recourse is seldom had to medical advice till after the first stages of the disease have made very considerable progress, and the season for using such means as might have been preventive of alarming symptoms hath been so irrecoverably lost, that extreme danger hath presented itself at the moment that assistance is procured, and the far more laborious task of removing difficulties hath immediately occurred; and in the latter case, every species of attention, both in the articles of prevention and cure, hath accompanied the process, from the first infection of the patient to the last period of the disease.

Yet occasions have not been wanting to try the efficacy, and prove the utility of treating patients, who labour under this disorder from natural infection, in nearly the same manner as we have prescribed for those who receive it from inoculation; and such satisfactory proof hath arisen of the salutary effects and happy consequences, which have in a variety of instances followed an adherence to these restrictions and regulations, that we think ourselves warranted to recommend

mend the observance of them, under certain necessary restraints, and with some exceptions, as a general line of preservation from the present and future horrors of this hitherto dreaded distemper.

The *confluent* small-pox, the melancholy effects of which are but too visible in many unfortunate individuals who have been the victims of it's malignity, claims our first and chief attention; and if the substitution of a mode of treatment, different in all respects from that under which those melancholy consequences ensued, will produce symptoms so different as to lessen our fears of death and deformity, and increase our hopes of not only preserving our lives, but the comforts of them, it is an object to be pursued with zeal, earnestness, and assiduity.

It has been already remarked, that in the natural small-pox, it is not usual to look for medical assistance till the appearance of the eruption itself, determines beyond a possibility of doubt, the nature of the disorder; by this time it is too late to expect *all* the good which might have been hoped from an earlier application, though some efforts may yet be made to abate the rigour of the unfortunate patient's fate.

It is therefore of great importance to be acquainted with the means of distinguishing the approach of this disease from that of certain fevers, to the preceding symptoms of which those of the small-pox bear a very strong resemblance; but knowledge of this sort must be acquired by great attention, which will in most cases, where opportunity offers of making the observations in time, enable us to prognosticate with tolerable certainty what particular disease will follow.

If the fever runs remarkably high; if the hot and cold fits, but in particular the latter, be long and severe; if loathing and vomiting succeed, and are accompanied with pains in the head, back, and loins; if the patient appears oppressed with wea-

rinefs, and disturbed with a great degree of restlessness; if his breath is uncommonly offensive, and he complains of a very disagreeable taste in his mouth; and if these symptoms should have the additional support of any probable danger of recent infection; little doubt can be entertained of their indicating the approach of the small-pox: but should that not happen to be the case, there is no reason to apprehend that the regimen which such a belief points out, will prove in the smallest degree injurious, should the complaints terminate in any other kind of fever.

Supposing, therefore, that we are apprized, by all or several of these symptoms, of the approach of the small-pox, the same medicines, administered at the same times, in the same proportions, and subject to the same exceptions; the same regimen as to diet, and the same treatment as to air, which hath been already directed for inoculated patients, may be recommended on the best authority, that of experience, as the surest means to obviate the difficulties, and surmount the dangers, to which the sufferer under this disease is much more certainly liable under the old and very contrary practice: nor do we over-rate the value of the modern management, when we consider it as the highest improvement in the art of healing, that either ever has been, or in all probability ever will be made; because we may venture to affirm, that taken at it's first stage, as we are now stating it, the fatality of this disease may be lessened in the proportion of at least four parts in five; and that consequently the introduction of inoculation, and applying the same treatment to persons infected in the natural way, may, and actually does, extend to the annual saving of many thousands of lives, contributing to the happiness of individuals, and proving a national blessing.

In all cases, then, where this disease is so discoverable by early symptoms, the management

nagement is already shewn; what follows must relate to patients, on whom, for want of sufficient indications or prognostics decisive enough to ascertain the nature of the distemper, the preventive methods could not be tried, and on whom the eruption is already out or beginning to appear.

In the latter case, the mercurial powder may be immediately administered, and the purging draught should follow it on the succeeding morning, as directed in the small-pox by inoculation; the patient should also be moved about in the open air; and if the progress of the eruption does not occasion an abatement of the symptoms, but they should continue or increase in violence, the medicines should also continue to be repeated at intervals during the course of the eruptive fever; and from this treatment great hopes may be entertained that the eruption may be checked, and the conflux and consequent danger in a great measure prevented.

But we are not to expect that the effects of regimen or management will be so immediately and sensibly felt in the natural disease, where the symptoms are generally violent, as in inoculation, where they are for the most part much more moderate; nor shall we easily succeed in persuading patients, who have taken to their beds to seek relief from violent pains and severe indisposition, to quit them for the disagreeable sensations of motion, and the chilling effects of exposure to the open air.

Yet such an exposure will in general occasion a considerable abatement of heat upon the skin, reducing the degree of it from violently hot to moderately warm; lessening the strength and fullness of the pulse, which however will continue quick; and should it even intermit, it is not in this case to be considered as an alarming symptom.

Though the pain in the head derives certain relief from the cool air, yet it does not so certainly, at least not so immediate-

ly, follow in the complaints of the back and loins; so that the necessary motion is productive of much trouble and fatigue: notwithstanding which, the patients themselves are in general so sensible of the benefit they receive from this toilsome undertaking; and from the alteration they begin to feel, entertain such hopes of farther and future ease, that in most cases they persist in the struggle with uncommon resolution; and finding the head-ach return on their retiring out of the air, are as anxious as their attendants to enjoy the advantage of it.

If the patient has complained of considerable sickness at his stomach, the medicines will in all probability promote it to vomiting; and this disposition should be encouraged by drinking freely of some warm diluting liquid, avoiding the cool air during this operation of the medicines, and for some time after, till the fatigue and perspiration occasioned by it are entirely gone off.

This effect of the medicines, being followed by stools, will in a great degree lessen the fever heat, thirst, sickness, and universal pains; and though the patient will sometimes appear low after these evacuations, yet the symptoms being abated, and the stomach capable of taking nourishment, a little thin broth of chicken or mutton, tea, gruel, and milk, will in most cases procure considerable refreshment; and a disposition to sleep succeeds, which should be indulged, but *upon* the bed only, in the day time, nor should the patient go into it till he lays down for the night.

By this conduct the fever preceding the eruption, and the many painful and disagreeable symptoms which attend it, will in most cases be alleviated, and the appearance of the pustules be delayed; and however dangerous such a consequence may have appeared in the old method of treatment, yet experience has convinced us, that the later the eruptions appear, the more mild in general is the disease; and we

have good reason to believe, that the pustules are not only retarded by the modern practice, but that they actually appear at length in a much more favourable manner, both as to numbers and size, than might have been expected from warm and encouraging management.

We have hitherto spoke only of the natural small-pox, as taken in the earliest period, and at the commencement of the eruptive fever; and we have ventured to recommend the same treatment as we have directed under inoculation, without the smallest doubt of it's being attended with very considerable success; but when these methods have been neglected till the eruption has made it's appearance, or till it is compleat, the danger is become more alarming, and a greater degree of caution and attention is necessary in our attempts to relieve by means so very opposite to those which have in all probability been hitherto used.

An abatement of the troublesome symptoms is the usual consequence of the completion of the eruption, and this agreeable change frequently lulls the patient and those about him into a false security, and they wait without apprehensions for the season of maturation, which, from the numbers and nature of the small-pox, often comes attended with alarming and dangerous circumstances.

But even should danger be apprehended at this state of the disease, few attempts are in general made to prevent it; the maturation is looked forward to as the crisis of possible relief; instead of which it is too often accompanied with such complaints as prove fatal, in spite of the utmost skill which can then be exerted.

But in this interval between the eruption and maturation, some endeavours should surely be made to avert the impending danger; for during this time the symptoms become aggravated, the strength of the patient is exhausted, and if he survives the

change of the pustules, he frequently sinks under the fever which accompanies or succeeds that event.

In this stage of the disorder, late as it may seem for the use of preventives, yet it may be adviseable to try the powder heretofore directed, at any time before, but not after the smallest signs of approaching maturation or ripeness; the frequency of giving it must in all cases be regulated by the strength and condition of the patient, and the following laxative draught, in the quantity of a small tea-cupful, may, if necessary, be taken at some distance after the powder, and repeated so as to procure three or four stools in twenty-four hours; but this will only be required when the powder does not produce the same effect.

Cream of tartar, one dram—manna, half an ounce. Dissolve them in one pint of barley-gruel, or tea made from any of the pectoral herbs.

But neither the administration of the mercurial and opening medicines, the carrying the patient into the open air, or even the admission of cool air through the windows, can in this state of the disorder be recommended as perfectly consistent with safety; nor do we know any particular cases which have occurred to discourage such endeavours to mitigate the severity of the unhappy patient's fate. Those who have resolution to make the trial, we think ought not to be prevented; nor, on the other hand, do we advise the experiment under authorities of equal weight with those advanced in the cases of inoculation; though it is by no means improbable, that as experience has now fully justified the cool and repellent treatment in the small-pox produced by inoculation, so the same excellent guide may in some future day make the use of it universal in that disease, even where it is occasioned by natural infection; excepting only, that the medicines of both kinds seem wholly improper when the small-pox is accompanied

accompanied with the fatal and malignant symptoms of bleeding or purple spots.

At present, therefore, it must be left to the discretion and judgment, or to speak more properly, the choice of the patient, and his friends and attendants, either to venture on methods which have been sometimes practised with success, but which may be considered as *possible means* of avoiding *certain danger*, or to pursue the old method of treatment, under such improvements as reason and ingenuity have from time to time suggested.

In the latter case, it will be prudent to consider very attentively the state of health, habit of body, and constitution of the patient, before the attack of the small-pox: on these circumstances, and on the judgment to be formed from such enquiries, must depend, in a great measure, the mode of treatment. But it must be remembered, that we are now treating of *the natural small-pox, in that stage of the disease which follows the eruption*; the eruptive fever, and all the preceding symptoms, having been considered under the head of *inoculation*, and rules and regulations prescribed, which will very properly apply to most, if not all cases of natural infection at that period of the disorder.

If the rising or filling of the pustules is prevented by extreme restlessness, gentle opiates should not be neglected, though the quantity should be carefully proportioned, so as to produce quiet, and not stupefaction: a tea-spoonful of poppy syrup now and then, at the distance of five or six hours, may be given to a young child, and the quantity increased to a table-spoonful for a grown person; for whom even this addition will sometimes prove insufficient, in which case a few drops of laudanum may be substituted.

If any degree of costiveness should attend the rising of the small-pox, it should be removed by gentle emollient clysters; at any rate stools should be procured, nor

should the patient be suffered to remain much more than twenty-four hours without this evacuation: a stool or two every day will greatly tend to cool and relieve. And the following drink hath been recommended as extremely refreshing, and very useful to abate the heat, and allay the thirst, which generally attends the small-pox, and in particular the severe or malignant sort, about the time of maturation.

Mix one part of the weak spirit of vitriol with two parts of the sweet spirit of vitriol, to the quantity together of half an ounce—add to this three pints of barley-water, or other diluting pectoral drink—and take it at pleasure.

A foul mouth, or dry and chopped tongue, should be frequently washed, and the throat gargled with jelly of black currants dissolved in warm water; or with honey and water, and a sufficient quantity of the currant-jelly, or of vinegar, to sharpen it.

A suppression of urine, or difficulty of making water, is a complaint very common in this disease; a tea-spoonful of sweet spirit of nitre may in such a case be added to the patient's drink; but moving him either out of the bed, or if that cannot be accomplished, setting him upon his knees, will usually procure relief, and a free and large discharge of urine is attended with very good effects in the small-pox.

When this disease is in so malignant a state as to be accompanied with black, purple, or livid spots, it will be necessary to have immediate recourse to the Peruvian bark, which may be given in substance, and repeated as often as the patient's stomach will bear it; and it should be administered in the following form.

One dram of the bark powdered—one ounce and a half of common water—half an ounce of simple cinamon water—and one ounce of lemon or orange-syrup. This may be sharpened by the addition of a small quantity of the spirit of vitriol.

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To a child, a table-spoonful should be given every hour, and to grown persons three or four; and as the effect depends on a sufficient quantity being taken, it should not be omitted, as often as it will remain on the stomach without exciting vomitings or reachings.

When these deplorable symptoms appear, the patient's food and drink should be particularly regulated: the former should be preserved fruits, of an acid quality, and apples boiled or roasted; and the latter should consist of generous wines, moderately diluted, and spirit of vitriol, lemon-juce, orange-juce, currant-jelly or vinegar, should be added to every draught.

Nor is the bark only prescribed in the putrid or spotted small-pox; it may be administered with success in those kinds where the pustules do not mature in the usual form, but where they fill with a thin, clear, and acrid matter, of a paler colour than that of the mild and favorable sort of this disease; and is often of great efficacy in promoting a due preparation of the matter, and filling the pock with that of a proper colour and consistence. And instances have frequently occurred where the use of the bark and acids hath effected this change, when the eruption hath been quite flat, the matter transparent, and the whole appearance very unpromising.

Bleeding, also, has in some instances been found very serviceable, when the pustules have flattened or subsided. Cataplasms to the hands and feet, may serve to promote the swelling, and very ingenious physicians have in such cases recommended bathing the extremities in warm milk and water, and even the whole body to the breast.

Such a number of boils on the body are attended with so much foreness and uneasiness, that the moderate use of gentle opiates is generally necessary about this time, to assuage the pain occasioned by the violent inflammation of the pustules and skin: for though the foreness and anxiety com-

plained of are generally good symptoms, and the want of those sensations would indicate danger, yet it is necessary to contribute as much as possible to the patient's ease, which in this case can only be procured by opiates; of which the syrup of poppies may answer the purpose with children, but grown persons will require a small quantity of laudanum.

The secondary fever comes on with the first appearance of an alteration or change of colour in the pustules; and this is considered as the most dangerous period of the disease, which generally proves more mortal in this than in any other stage.

At this turn of the distemper, nature frequently makes her effort to relieve the patient by the evacuation of purging; and this disposition ought to be encouraged, a change being made in the patient's regimen as to diet and drink, which should at this time be more nourishing and generous, in order to support those critical and salutary discharges.

If at the approach of the secondary fever, the pulse beats quick, hard, and strong; if the heat becomes intense, and the breathing is attended with difficulty; if acute pains of the head are accompanied with any tokens of approaching delirium; it will be necessary to bleed immediately, as a delay may be attended with consequences fatally irrecoverable. The state of the blood then drawn will shew it's very inflammatory condition; and this appearance will account for the inflammations on the eyes and lungs, quinsies, rheumatisms, and external abscesses, which frequently succeed this disease.

But, on the contrary, if in the secondary fever the pulse becomes low and languid; if the pustules and the spaces of skin between them turn pale; if the patient is seized with any degree of faintness, or his extremities grow cold or clammy; blisters and warm medicines are recommended; and even the free use of considerable quantities
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of warmed wine, hath been in such cases advised.

If towards the close of the maturation, the salivation or spitting should abate very considerably, and the matter grow so thick and glutinous as to be thrown off with difficulty, the same methods may be taken to promote the discharge of it, as are already recommended in the directions for the management of the small-pox by inoculation.

Opening the pustules, when they arrive at maturity, hath been also advised; nor do we see any reason why the taking off a load of acrid matter, and lessening the tension or stretching of the skin, both which no doubt contribute to keep the secondary fever high, should be attended with any ill consequence; it has certainly been practised with safety, and may probably prevent the marks which the matter corroding under the scab generally occasions.

But this operation should not be performed till the pustules turn of a yellow colour, and may either be effected with scissars or the point of a needle, and the matter taken off as it flows with dry lint; but as the pustules fill again, and sometimes even a third time, it will be necessary to open them repeatedly, at least as long as they shew any considerable quantity of matter. The eruption in the face generally changing first, the operation will begin there, and may be extended to the other parts of the body.

Nor is this operation attended with any degree of pain or inconvenience; with children it may be performed whilst they sleep, without the smallest danger of awaking them; nor does it occasion the least smarting or soreness, but generally alleviates the inflammation which accompanies this stage of the disease.

At this period of the distemper it is of no small advantage to shift the linen of the sick, which must by this time be grown exceeding foul, stiff, and offensive, and extremely troublesome and uneasy to them;

besides that it pollutes the air of the chamber, and renders it so unfit for respiration, as not only to affect the patient, but to be almost intolerable to those in health, who are engaged in attendance, and other necessary offices about the diseased: nor is the inconvenience confined to the immediate loathsome effects of this species of impurity; the contagious particles of this poisonous exhalation passing into the blood again through the lungs, tend to it's farther corruption. Nor should fresh air be excluded, under proper precautions, and with due regard not to make too sudden a change, or too violent an impression; but the removal of the offensive linen, and opening windows and doors with prudence, will frequently produce very extraordinary effects in the recovery of those who have suffered under the severity of this disease; nor is it at all necessary, or even proper, that the linen intended to change the patient should be previously worn by another person, whose perspiration will certainly render it unfit for the intended purpose of refreshing and comforting the sick: whatever apprehensions may have been formerly entertained, no manner of danger attends the putting on clean linen, provided it be made perfectly dry, and reasonably warm.

Nature frequently attempts to throw off, by a diarrhoea or looseness, the great quantity of suppurated matter, which, after the compleat maturation of the pustules, either falls into the stomach and intestines from the glands and other vessels, or is swallowed from the mouth, throat, &c. but if this should not happen, clysters will at this time be extremely proper; for this mass of corruption lying long in the guts, and becoming daily more putrid, grows at last so extremely acrid, as actually to corrode them, or so greatly irritates them as to bring on the very worst kind of purging, a dysentery, and so produces a disease where nature pointed out a remedy.

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opening medicines be at this stage of the disease omitted; the secondary fever is kept up by the suppression of perspiration, from the crust which covers the surface of the skin; some discharge is required to be substituted in it's place, and the most natural, safe, and effectual, may be procured in this way.

Though it has been generally thought right to purge after the small-pox, yet it will be found to be more or less necessary, according as the patient hath been costive, or the contrary, during the course of the disease; but at any rate it will not be proper to neglect it wholly, lest boils, swelled glands, and ulcers, should follow, which is not unfrequently the case.

Stewed prunes, in which have been infused the leaves of senna, is a proper purge for young children, to which may be occasionally added a little rhubarb in powder. Youths and grown persons may take from eight to twelve grains of rhubarb at night, and the like quantity of jalap the following morning; and these purging doses may be repeated three, four, or five times, as circumstances require.

When the disease has been severe, ulcers and imposthumes will sometimes follow: no attempts should be made to repel or disperse these humours, but they should be ripened by common poultices of bread, milk, and oil, as speedily as possible; and after they have burst, or been opened, as necessity may direct, the patient should be purged, and for some time confined to a milk diet, and advised to the use of the Peruvian bark, which may be administered in substance in Port wine and water, or wine alone, according to the age and situation of the patient, which will also direct the proportion of quantity, from one dram to five or six, which should be repeated daily as long as these complaints continue.

From the universal prevalence of this dreaded disease, it's various symptoms,

appearances, and effects; the great improvements already made in the artificial communication, and subsequent management of it; the happy application, in some instances, of the same treatment in the natural small-pox; the great hopes which may be entertained of extending this preservative system beyond the narrow limits of private and particular opinion, by repeated experiments of it's safety and success; and the necessity which appeared of prescribing with several alterations, and under different regulations, the old practice, in some circumstances, until the more modern shall have received the unquestionable sanction of confirmed experience; we have been induced to dedicate a large part of our work, and a considerable portion of our attention, to the consideration of this disease, and to the pointing out the most obvious and approved methods of averting the dangers, and obviating the difficulties, which may occur in the approach, progress, and disappearance of the small-pox.

And from the whole, the following inferences may be drawn, with a sufficient degree of precision to influence the practice, and direct the conduct of the medical assistant, the necessary attendant, and the patient himself.

That inoculation is in almost every case adviseable, as an easy, safe, and certain method of passing through the disease, without the anxiety of mind, bodily pain, and risque of probable evil consequences, always attendant on the small-pox taken from natural infection.

That the present method of conveying the infection by a slight puncture, or scratch, and leaving the infected parts without covering or dressing, is more consonant to reason, and more likely to produce the disease in a mild and favourable way, than deep incisions, large quantities of infectious matter, and dressings, pledgets, and plasters, tending to promote immediate suppuration.

That

That no single instance hath been well proved, that the infection, communicated in this way, hath ever failed to perform it's office, or that any person who hath passed through this disease under inoculation, hath ever been subject to the contagion afterwards, either in the natural way or otherwise.

That the modern cool and repellent regimen and management, under the regulations of prudence, and the restrictions of caution, according to the rules heretofore laid down, may be relied on as generally successful, and never detrimental.

That the gentle mercurial medicine prescribed, either taken as a preparative, or according to the directions given, in the progress of the disease, is attended with the happy effect of contributing to abate the violence of the symptoms, and to lessen the severity of the disorder, both as to fever and quantity of eruption.

That cool air, and cold water, at a due distance from the administration of the medicine, will increase the good effects of it; but that indulgence in these articles, during it's immediate operation, may counteract it, and occasion disagreeable consequences.

That the various complaints said to have usually followed inoculation in the old method, are by the modern treatment wholly avoided; under which, inoculation may be said never to have injured one constitution, but to have benefitted many.

That the same medicines, regimen, and management, may be happily applied in the natural small-pox, whenever the symptoms ascertain the disease before any appearance of eruption, and will, in general, in all such cases, contribute in a very considerable degree, to prevent the load of pustules, and the consequent fatal effects of this disease in it's natural state.

That even on the first appearance of the eruption, the medicine hath been administered, and cool air admitted, with great suc-

cess; but that this practice is not so fully established as to afford us sufficient grounds for general recommendation; though where there is no want of resolution, either in the patient or those about him, to give a fair trial, little doubt can be entertained of it's proving highly beneficial.

And that where opportunities do not offer to meet the disease in it's progressive state with preventives, and maturation has approached without recourse being had to the cooling and repellent means, the old method of treating the natural small-pox may receive very considerable improvement, by attending to the foregoing directions on that head.

It may be necessary, before we conclude this chapter, to take some notice of an opinion which long prevailed universally, and in the support of which many advocates may still be found; though we confess the evidence of facts, supported by common reason, have so fully convinced us, that we beg leave to declare we are not of that number.

Till within a very few years, the small-pox has without a question been considered as an epidemic disease; and physicians, and other writers of the first learning and eminence, have dwelt with much subtilty of argument, and plausibility of reasoning, on the regular course and certain returns of this disorder at fixed times and stated periods, paying no regard to contagion, or condescending to attribute the appearance of it to any such ordinary event.

But in order to support the idea that any disorder is truly epidemic, it is necessary to believe, that no traces can be discovered of the first infection, but that it hath generated in the human body without any external cause, or been occasioned by some disposition in the air, or other natural or ordained concurrence of circumstances.

Whatever may be the case with respect to many other disorders, this conception can by no means reach that of which we are

are now treating; as it is well known, and established as a fact, that the small-pox made it's first appearance in this country about the thirteenth century, and is universally allowed to have been imported from Asia by some of those deluded bigots who were induced by pretences of religion to follow leaders actuated by far different views, to those wars which have since been distinguished by the title of Crusades.

Having thus traced the origin of the distemper, it will follow of course, that the progress of it must have been occasioned by the communication of infection; for if it can be generated without contagion, what reason can be assigned for it's never appearing in this island till within the last four or five hundred years; or how are we to account for it's not having visited some parts of Europe longer than seventy or eighty years, or for it's total forbearance of some particular spots which were never known to be subject to it's influence.

Nor need we be at a loss to conceive, that after raging with violence in particular places for a considerable length of time, it may suddenly disappear, and not visit the same spot again for a certain number of years; because after it has gone through those who have been born or settled subsequent to it's last visitation, the progress of the disease must be staid for want of subjects, who will be renewed again by the same means in a certain course of years; and the contagion being again communicated, either by the infection of the atmosphere with the effluvia of persons sick of the distemper, by travellers from infected places, or by other natural and common accidents, the disease will again resume it's fury, and rage as long as it finds subjects to work upon, and then cease as before.

But the effect of inoculation puts this matter beyond doubt; at all times, at all places, at every season of the year, and in every temperature of the air, the disease

is produced from communicated infection without the smallest risque of failure, and that too, not only in places where it hath lately, but where it doth at the very time prevail in the natural way; the patient under inoculation receiving the infection, and going through the disease, without being in the smallest degree affected either by the air then actually infected, or being liable to the symptoms of the natural small-pox, though surrounding him on every side.

To this may be added, that there are certainly some persons so constitutionally framed, as never to be subject to any degree of this distemper; and though it may be attended with great difficulty to account for this exemption, or to describe the nature of it, yet the fact hath been ascertained not only by the concurrent testimonies of the persons themselves, their relations, friends, and those with whom they have passed their lives, but by experiments of repeated inoculation and exposure to natural infection; neither of which have produced the slightest symptom of the disease; and such persons have passed through life without appearing to be at all liable to it.

But the number of those so circumstanced is comparatively small; and when we consider that the utmost extent of human penetration reaches not to the power of discovering by any signs, marks, or symptoms, the constitutions so framed, and that therefore such persons are doomed to pass their lives in a state of constant apprehension and anxiety, we can hardly treat this peculiarity as a favourable distinction.

We shall conclude this part of our work with a few cases, selected mostly from eminent and popular writers on this subject; for though we have ourselves carefully examined and applied, in the course of this work, such as have fallen within our own knowledge, yet in a disease so universal as the small-pox, exhibiting such an amazing variety of symptoms, situations, and widely different circumstances, we think it may afford

afford our readers satisfaction, to give them an opportunity of tracing the whole progress of this distemper, where it has been accompanied with any singular appearances; a method which we mean also to follow in some other of the most affecting and dangerous maladies of which we shall have occasion to speak.

CASE I.

Of the Rash and Erysipelatous Appearance on the Skin in the Eruption of the inoculated Small-Pox.

A Strong healthy man of twenty-four was inoculated on the ninth of the month; the eruptive complaints began about the seventeenth day of the month, and the eighth from inoculation. On the tenth day from inoculation, a swelling attacked one arm from the elbow to the shoulder; and the other was affected, but in a less degree: in the evening of the same day he complained much of soreness and pains about his stomach, and the whole surface of his skin was now covered with a rash, and blotches or spots differing in size and colour; the former being composed of very small pimples resembling the first appearance of the confluent small-pox, and rising above the skin; the latter interspersed here and there, but even with the skin, and smooth to the touch; some not larger than a flea-bite, and others of a much larger size; some of a dark purple, and others livid. But these appearances were not accompanied with any considerable fever, nor was it attended by any pains in the head or back, or by any extraordinary weakness. At the patient's going to bed he was directed to drink a basin of wine whey, and by the morning the rash had assumed a less inflammatory hue, and was changed to a darker; large pustules of the real small-pox were now plainly distinguishable, and

from this time every thing went on in the usual favourable way: the arms, however, retained the livid colour for some little time, but gave the patient no uneasiness; nor did any other extraordinary symptom intervene in the whole process, but the disease was mild, and got through perfectly well.

CASE II.

Of the Rash before the eruptive Symptoms, and the Return of it at the Approach of the Eruption.

A Young woman, twenty years of age and in perfect health, after taking two of the preparatory powders, was seized with a slight fever and sickness at her stomach, and these complaints were followed by a rash of the foregoing description; on this appearance the operation of inoculation was deferred a few days, in which time the rash was entirely gone. On the seventh day after she had received the infection, the eruptive symptoms came on, accompanied with a higher degree of fever, and more violent pains than usual in the head and back, and attended also with sickness and vomiting; and these symptoms were followed by the universal return of the same kind of rash as had appeared before: the patient was now advised to keep her room, and the following medicine was directed to be taken immediately.

Compound powder of crabs claws, one scruple—emetic tartar, one grain.

This medicine operating moderately by vomit, and discharging some bile, and also procuring stools, the stomach was relieved; but the rash remained, and assumed so much the appearance of the confluent small-pox, as to excite some degree of doubt and apprehension in the medical attendant, not-

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withstanding the similar appearance in the early part of the preparation; and this doubt was heightened by the continuance of the fever, and of the pains in the head and back. Under these complaints, the patient was directed to confine herself to her room, but not to her bed; and a saline mixture, with a small addition of the compound powder of crabs claws, was prescribed and immediately taken.

On the tenth day from inoculation, distinct pustules of the small-pox were visible, the rash grew of a paler colour, and no other particular or unfavourable symptom appeared in the progress of the disease, at the termination of which the skin peeled off, as usual after a common rash.

CASE III.

Of the sudden Appearance of the Symptoms after Inoculation, and the hasty Progress of the Disease.

ON the nineteenth of the month, a florid young man, and perfectly healthy, received the infection in both arms, and on the very same day felt a disagreeable numbness and stiffness in one arm, from the incision to the shoulder; and at night, going to bed, he took a pill containing five grains of calomel.

On the twentieth, the same sensation had extended itself to his head, in which he felt some pain; and the complaints in the arm continued this day (in the evening of which he took another mercurial pill) and all the next.

On the twenty-second, after a restless night, none of these symptoms were abated, but they received the addition of a stiffness in the shoulders; the pulse quickened, but little or no fever, and the incisions were uncommonly forward.

On the twenty-third, the patient rode fifteen or twenty miles, although he had

discovered several pimples about him before he went out, and on his return in the afternoon many pustules were discoverable, which had every appearance of small-pox; his arms were also in the state usual at the period of eruption, and the complaints or eruptive symptoms were entirely gone.

The twenty-fourth, he followed his amusements abroad.

The twenty-fifth, the pustules hastening to maturation, he was requested to keep somewhat more in the house, where they ripened so speedily, that,

On the twenty-seventh, he took a purging medicine, and the following day was discharged from all restraint, and continued from that time in good health.

CASE IV.

The like.

ON the fifth of the month inoculation was performed on a healthy man of thirty-eight, and on the seventh his arm itched much, and exhibited certain signs that infection had taken place.

Soon after the inflammation about the places of inoculation abated very considerably, the incisions appeared inclinable to heal, and the patient was free from uneasiness about these parts, and from any other symptoms of indisposition.

But on the twelfth and thirteenth, he was attacked by pains in his limbs and head, and stiffness under his arms, which may always be considered as a strong proof that the infection has operated; yet the pulse underwent no change, nor was there any sign of fever, but a very few pimples succeeded these complaints, some of which disappeared soon, and others remained long enough to have a little matter, but in a very irregular way; nor, but for the almost infallible tokens at the places of insertion, would these eruptions have been determined to be the small-pox.

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However, to remove all doubt, the patient was inoculated again, but without any effect.

CASE V.

Of the sudden Appearance, and going off of the usual Symptoms without any Eruption following.

ON the second of the month, a young gentleman of nineteen took the infection; and,

On the third, having taken an airing in an open chaise, was surprized by rain, and returned wet.

On the next morning, he complained of not having rested well; of shooting pains in his head, and somewhat of a sore throat; which complaints, as well as a feverish heat which attended them, he ascribed to his having taken cold the preceding day: at this time there was a quickness in his pulse, not accompanied with heat, but with a moderate perspiration.

About ten he got out of bed, but did not go abroad the whole day; and complained of pains in his head and shoulders, of weariness, and an itching and uneasy sensations about the incisions.

On the fifth, he found himself better, and went abroad, still attributing his indisposition to the supposed cold. But at this time, the places of insertion were considerably inflamed, and the whole appearance of them so forward, as to afford room for conjecture that the inoculation would terminate here.

On the seventh, the inflammation of the incisions was so considerably abated that they seemed disposed to heal.

No eruption having appeared, and there being now no probability of any, the patient was inoculated again in the evening of the seventh, with other matter from a

subject who had the distemper in the natural way; but no marks of infection followed the second operation; and he continued for some time to put himself in the way of receiving the natural infection, but without the smallest effect.

CASE VI.

The like.

A Man, aged twenty-four, was inoculated on the eighth of the month, and was directed to take two calomel pills; one the same evening, the other the following; and the succeeding morning an ounce of purging salts, which operated well.

From hence to the eleventh, he complained of a little giddiness; and on the tenth, of about an hour's head-ach; but was in other respects perfectly well, only that his arm had itched much.

On examining the incisions, on the eleventh, they appeared considerably inflamed and seemed in all respects as if the eruptive fever was just approaching.

On the twelfth, he complained that his arm-pit was stiff and felt swelled; and he also mentioned having some pain in one of his shoulders.

However, all these symptoms went off, and he continued perfectly free from every kind of illness, till the fifteenth, when the arms appeared as usual in the mildest process of this distemper, not entirely free from inflammation, nor much affected with it.

On the fifteenth, this patient was inoculated again, and particular care taken to convey a sufficient quantity of infected matter.

On the sixteenth, he took a gentle purge of manna, in the infusion of fenna; but he continued quite well, and the repeated inoculation did not produce the least sign of infection.

CASE

C A S E VII.

Of the Appearance of new Pustules after the eruptive Complaints had ceased, and after that Stage of the Disease had been supposed to have passed.

A Healthy young man was inoculated on the sixth of the month: on the eleventh and twelfth he complained of pains in his limbs, head, and back, and had fits of heat and cold alternately.

On the thirteenth, he found himself much easier, though the pains in his head and back continued; and on this day the inoculated parts gave evident tokens of infection, though the skin at the lips of the incisions was pale, and did not seem elevated; nor was there any appearance of thin matter under the external skin, as usual in the regular process of infection; or had the patient felt much uneasiness about the places of insertion, or any stiffness or swelling in the arm-pits.

On the fourteenth, he was free from complaint, but great parts of his arms appeared discoloured, and two or three pustules were discoverable about the places of insertion.

On the fifteenth, near a hundred pustules appeared on different parts of the body.

On the sixteenth, the pustules advanced very properly, and the patient seemed perfectly well, but the places where the infection had been introduced were covered with a very considerable number of small pale-coloured confluent pimples, and the incisions were depressed instead of being raised, which sometimes happens, and commonly foretels an ulceration of the parts towards the conclusion of the disease.

On the seventeenth, a shivering fit attacked him in the middle of the day, which was succeeded by heat, and by violent pains in the limbs, head, and back, con-

tinuing all the following night. He likewise complained of pains at the incisions, arm-pits, and shoulders.

In the morning of the eighteenth, the pains at the incisions and one arm-pit seemed to be increased, and were accompanied by a high fever and quick pulse; and a second eruption being now apprehended, he was advised to go into the air, and to take the infusion of manna and senna, which operated freely, and all his complaints abated.

But about this time a fresh eruption made it's appearance, of at least double the former quantity, and he continued free from every complaint; both the first and last set of pustules maturing favourably, and what may appear extraordinary, ripening nearly about the same time; for the former crop seemed retarded by the second eruption, and the latter advanced more rapidly than usual.

C A S E VIII.

The like.

A Man, aged forty-four, began to complain of pains in his head and back, and of extreme cold, on the sixth day after inoculation; these complaints continued with such severity, that he was advised to take the alterative pill and purging draught, and to keep much abroad till the ninth; when, upon the appearance of about ten pustules, his indisposition ceased, and this little eruption seemed disposed to go off without maturation, as sometimes happens where there are so few pustules.

On the twelfth, he took purging physic, and though his arms still remained much inflamed, he removed to some distance from the place where he had been inoculated, and soon after his removal he became again much indisposed.

On the fourteenth day from inoculation fresh pustules began to appear, which had increased in number by the seventeenth day

to about the number of forty in his face alone, which maturated and went off in the usual way: but during the whole time his arm continued much inflamed, with several pustules near the incision.

CASE IX.

Of the Natural Small-Pox, treated according to the modern Method prescribed for Persons under Inoculation.

ON the twenty-second of the month, a poor man was seized with a shivering fit, which was then supposed to be the attack of an ague: soon after he became extremely hot, and complained of violent pains in the head, back, and loins, which continued till the twenty-fourth, and during which time he kept his bed.

His pulse was now extremely quick, the heat great, and the pains in his loins severe; and there was at this time but little doubt that these symptoms indicated the approach of the small-pox, which prevailed much in the neighbourhood.

Though on other occasions a man of resolution, he was now with great difficulty persuaded to quit his bed, declaring he was apprehensive he should not be able to support himself; he however collected his spirits and strength, got into the air, and with assistance, reached a bench at the distance of an hundred yards from his own habitation: here he complained of great weakness and violent pains in his loins, the acuteness of which he described, by saying, he felt as if he was cutting in two; but he admitted that the air had relieved his head.

A pill, containing six grains of calomel, and one eighth part of a grain of emetic tartar was immediately administered; and, as he complained much of thirst, he was permitted to drink half a pint of cold water after the pill, but was advised to keep

moving, which he attempted, though with extreme pain.

After continuing in the air somewhat longer than a quarter of an hour, the pain of his head abated, but that of the back and loins continued as before: his pulse had undergone a considerable change; for instead of being full and strong, it was now rather low and quick, and the heat on his skin much abated.

All this happened from ten to eleven in the forenoon; and the patient seeming greatly fatigued, he was permitted to return to his house to refresh himself; but was desired not to go into bed, or to take off his cloaths.

About two o'clock of the same day, the pill had procured two stools; the patient got into the air again: but this was a voluntary effort; for he found himself relieved from the head-ach as soon as he got out, and perceived the return of it as soon as he came into the house. Towards the evening the pains in his back and loins decreased, and about seven he was permitted to go into the bed. He rested but little, and on the twenty-fifth his complaints continued much the same as the preceding evening; only that his pulse was higher, and the heat rather greater: some few pustules of a small size now began to appear, and he was directed to take a purging draught of manna, infusion of senna and jalap, and advised to get up and venture into the air again; this he complied with, and by two o'clock his physic had operated three times, and he found himself more free from pains in his loins and back; more pustules now appeared in his face, but very few on his limbs.

From his first seizure he had only swallowed diluting liquors; such as tea and milk, and herb teas; loathing all kinds of more substantial food. He kept abroad the greatest part of the afternoon, and towards the evening his pulse grew more calm and regular, his pains abated, and he found

found himself disposed to take some nourishment: at seven he went to bed.

This night he slept but little, had one purging stool; and in the morning of the twenty-sixth felt himself languid and low, but his pulse was full, even, and regular, and he had no great degree of heat: many more pustules now appeared in his face, but still a few only on his limbs; the pains in his head and loins went off, he eat milk pottage with some appetite, and kept in the air the greater part of the day.

In the afternoon he lay down on the bed and fell asleep, but soon after waked almost choaked with blood, which he vomited up, though it was apparent he had swallowed it, as his nose was bleeding; the whole quantity did not seem to exceed six or eight ounces; but he complained of being faint, yet he said his complaints were removed. He was now ordered to drink the pectoral decoction, with equal quantities of sweet and weak spirit of vitriol, and the eruption proceeded slowly in his face, and on other parts of his body: towards the evening he had two more purging stools, complained of being very faint and low, and seemed apprehensive he should not rest.

An anodyne was now thought necessary, and he was ordered to take three drams of mithridate, with which he passed a comfortable night, had refreshing sleep, and in the morning found himself quite easy.

The eruption was now compleat; his face was rather full, but the pustules were distinct; on the rest of his body they were fewer in number, and of large size; and from this time he went through the disease without danger or difficulty.

C A S E X.

The like.

A Young woman being seized with the usual symptoms of a fever, and some eruption appearing on the third day, the

disorder was apprehended to be an inflammatory fever and a rash; and as she grew extremely delirious, a blister was applied: about this time it was discovered that she had the small-pox; her face was full of very small pustules, and a considerable quantity appeared on her neck and limbs; but the fever ran very high, attended with extreme heat, and she was so delirious as to discover few other signs of reason, than repeated complaints of pains in her loins, stomach, and head.

Circumstances attending her situation, made it absolutely necessary to remove her; and hazardous as the attempt might appear, it rather concurred with a design then formed of trying how far the methods so happily pursued in inoculated cases would succeed in this, where it was evident the small-pox would be of the confluent sort, and from the violence of the symptoms, extremely probable that the disease would prove dangerous.

She was, therefore, immediately taken out of bed and dressed, being then delirious and totally incapable of helping herself, brought down stairs by three persons, and placed in a chair, where she was supported, being from extreme weakness unable to hold herself up.

The fatigue attending this motion, and the change of posture, brought on a faintness, she lost her colour, and the pustules disappeared.

It was now thought right to bring down the bed and place it on the floor, and the patient was laid upon it with her cloaths on: being offered a glass of cold water, she drank it eagerly, and soon after her colour returned; the pustules re-assumed their former appearance, but she grew more cool; her pulse, though still quick, was less strong; her reason began to return in about half an hour, her restlessness abated, but she seemed tired and low; the window was ordered to be open, and the room to be kept cool, and a pill of three grains of calomel.

Iomel and one eighth part of a grain of emetic tartar was immediately administered, and a purging draught as soon after as it could be conveniently procured. The blister was taken off as unnecessary.

In the evening she was removed to a house at a small distance, where she rested tolerably; and after the operation of the medicines, which gave her three stools, she became perfectly sensible, and comparatively free from complaints.

She had, however, the confluent small-pox, and was extremely full all over her body, but the inflammation and maturation were regular and favourable; and it was discernable, that under this management some of the pustules in the face were actually repelled, the numbers appearing in the progress of the disease to be less than at the eruption.

CASE XI.

The like.

IN the beginning of the month of June, a young woman was attacked with the usual symptoms of the small-pox, such as shivering, heats, fever, and pains in the limbs, loins, and head, all in a very violent degree, and attended with such a general weakness, that she was obliged to take her bed within a few hours after the first seizure, where she very soon became delirious, and shortly after so insensible as that her urine went off involuntarily. And in this state she remained till about forty hours after she was first taken ill, when her pulse was extremely quick, but not strong, the heat excessive, and a few small eruptions appearing on the face, sufficient however to ascertain the nature of her disorder: being attempted to be raised, she made no effort to support herself, and was therefore permitted to lie down again, and the room being small, the window was thrown

open; five grains of calomel were got down with great difficulty, and the infusion of fenna and manna was prepared, and the attendant desired to give the patient a small quantity at a time till it procured a stool.

It was necessary that she should be removed out of the house where she fell sick, yet in her present condition it was impossible, and she remained where she was, and continued in the same senseless way the whole night; but in the morning she grew better, spoke more reasonably, had two stools, and threw up a quantity of bilious matter by vomit.

This was the third day of her illness, and the heat was still great, the pulse quick, and many pustules, apparently confluent, shewed themselves as well on other parts of the body as the face. She was now taken out of bed, and the window kept open; but it was yet doubtful whether she had strength enough to bear being exposed to the open air.

In the evening, however, her complaints being considerably abated, and the eruption much increased, she was removed to a house in the neighbourhood, and again took three grains of calomel, and one eighth of a grain of emetic tartar.

This night she took some rest; but as the fever continued, and she had no more stools, she was directed to repeat the use of the infusion of fenna and manna, which gave her three stools before night, when all her complaints abated, though she was full all over her body of a very confluent kind of small-pox.

She soon after became quite blind, notwithstanding which she sat up by her own choice the greatest part of several days, and went through the disease with uncommon ease considering the very large quantity of eruption, seldom making any other complaint than of soreness, or taking any other medicine than a gentle opiate towards the crisis.

CASE

C A S E XII.

In support of the Opinion, that some Constitutions are so framed as not to be liable to the Small-Pox.

THE parents of three children, one of whom had died of the confluent small-pox, and a second dangerously ill of the same disease, requested that the third might be inoculated, as a chance for preserving it's life.

Under the conviction that such a measure would be productive of no ill consequences, though the child should have then taken the natural infection, of which there was the strongest probability, as the whole family were in one room, the request of the parents was complied with, though from the circumstances little hope could be entertained of success, as the child might be expected to fall ill every moment. The infection was accordingly communicated from the virulent matter of the other, which died very soon after, but not the least marks of infection could be observed to follow the inoculation, either in the appearance of the arms, or in any consequent indisposition, though strictly and attentively observed; but the child continued in perfect health from this time, which was about Christ-

mas, till the following May, when it was proposed to take the child to a patient then full of the natural small pox, and near the crisis; this was accordingly done, and it was inoculated again with fluid matter, and even suffered to touch the sick person; but these experiments produced no more effect than the former inoculation, and the child remained perfectly well.

C A S E XIII.

The like.

A Whole family were inoculated at the same time, and all except one child sickened at the usual distance from the operation, with the common symptoms, and all went through the small-pox in a very favourable way; but no marks of infection appearing on this one child, even at the places of insertion, it was inoculated again, continuing the whole time in the same apartment with those who had the disease; but this inoculation had no more effect than the former, nor produced the smallest symptom of illness.

At the distance of several months the operation was repeated a third time with as little success as before, and the child was frequently afterwards exposed to natural infection, but remained perfectly free from the distemper.

B O O K I'.

Of the natural Passions and Affections, and of the ordinary Functions, Avocations, and Employments of Life, as they are supposed to affect bodily Health.

C H A P. I.

Of the Passions of Love, Anger, Grief, Joy, and Fear.

BEFORE we speak of the disorders incident to grown persons, and to which they are more liable than to those of which we have already treated, it may not be improper to consider in what cases the passions of the human mind influence the disposition of the body, and how far the ordinary functions, avocations, and employments of life, affect health, constitution, and strength.

How the passion of *love* can be conceived to affect the health of the human body, is a question more easily answered by instance than argument; daily examples furnish us with melancholy proofs of the most vigorous constitutions destroyed, and the fairest structures of health overturned, by an excess of the most amiable passion which acts upon the human mind.

Though the business before us is to speak of the effects, and not to define the causes of the passions; yet, perhaps, a little attention bestowed on the one, may enable us to perform the other with the more precision and perspicuity.

The passion of *love*, in it's pure and genuine sense, we understand to be a desire of receiving and communicating happiness, and directed to a particular object, under an idea, that from a conformity of mental or

corporeal endowments or qualifications, an union may be formed productive of this happy effect.

Nor shall we be induced to alter our opinion of the ground-work and foundation of this passion, by being told, that we frequently find deformity, in the garb of love, pursuing beauty; age on the same road after youth; and virtue impatient to join hands with vice and wickedness: for all these seeming incongruities may be reconciled, by reflecting, that we have not described the depraved, but the genuine passion of love; and that the most amiable of all passions, and the most laudable of all pursuits, are alike capable of being perverted to absurdity, and of degenerating into folly.

Allow us then to adhere to our definition, and we shall soon discover how possible it is, that a passion so noble, innocent, and pleasing, may yet prove as injurious to health, as it is too often destructive to happiness.

No arguments are necessary to prove, that minds, dispositions, and inclinations, are under no restrictions or regulations of rank, fortune, or circumstance: congenial souls may take fire at the pure lamp of love, and burn during the existence of 'a

vital spark; nor is the flame extinguishable by the mandates of authority, the interference of advice, or the dark letter of human law.

Hence, corroding care, oppressive melancholy, unavailing complaint, and all the health-impairing attendants of hopeless love; and hence loss of appetite, disturbed rest, hypochondriac disorders, and too often consumptions, to end the sad catastrophe.

On every such occasion medical assistance is vain; diseases of the heart admit but of one species of cure, and the specific is in the hands of parents, guardians, and friends.

Almost every prescription of physic or regimen is accompanied with suitable directions for management, addressed as well to the patient himself, as to his attendants and friends; among the rest, the regulation of the passions is constantly recommended; and indulgence of anger, grief, joy, or fear, expressly forbid, as tending to lessen the effect and counteract the operation of medicine, to augment the dangers of disease, and increase the difficulties of cure.

But I apprehend, it will hardly be contended that the human mind, under the immediate influence of any one of those passions, is but little attentive to the dictates of Reason; and that the moment it becomes calm enough to listen to her voice, advice ceases to be necessary.

To subdue the violence of *anger*, is the duty of a Christian; to moderate *grief*, and restrain *joy*, the work of a philosopher; and to obviate the impulse of *fear*, improperly denominated a passion, is a task only to be performed by a repeated and constant exposure to the effects of this percussion; which, like leading up a horse to the ranks, may blunt the edge of apprehension, and produce a kind of mechanic resolution.

But notwithstanding the difficulties that occur in our attempts to restrain those headstrong arbiters of our fate, yet the fatal con-

sequences which attend the suffering them to reign uncontrouled, cannot be too pathetically described, or too often inculcated: to overcome the prevalencies of human nature may amount almost to an impossibility; but to lessen their violence, and curb their irregularities, is equally our interest and our duty.

Would the *angry man* suffer himself, in the lucid intervals of rage, to reflect that fevers and inflammations are the certain effects of hastening the circulation of the blood; that bursts of passion do not unfrequently occasion sudden death; and that all the functions of life are obstructed by an excess which has not even the excuse of momentary pleasure; he would voluntarily bridle his impetuosity, nor suffer himself to be the victim of his own indiscretion.

If the man of *resentment* would recollect, that disease and choler breed together; that the brooding cares of unsatisfied revenge prey on the constitution, and with the slow but sure effect of poison, occasion the most obstinate, though perhaps not the most immediate disorders; if he would teach himself to believe, that forgiveness of injuries is the severest punishment he can inflict upon his enemy, because it adds to the enjoyment of his own comforts, contributes to the blessing of health in this world, and ensures his happiness in the next; he would practise only the divine doctrines of retaliation, and preserve his body in undisturbed security, and his mind in unruffled tranquillity.

But, respecting these passions of anger and resentment, some cautions are necessary to be directed to another quarter. When the body is worn down by disease, the mind seldom retains it's vigour; the acute sensations of continued pain naturally produce restlessness, peevishness, and dissatisfaction; and it should be the care of the friends and attendants of the sick, to soften the rigours of distemper by soothing the anxieties which are occasioned by it, to hide in the progress
of

of illness possible danger, to lighten in representation the pains of necessary operations, to avoid every species of contradiction, and to consult the ease and quiet of the patient's mind, as ingredients absolutely necessary to promote the success of medicine.

But if anger and resentment are subversive of health, how much more fatal are the effects of *grief*: the ebullitions of anger, and the gratifications of revenge, procure at least temporary relief; but the effect of grief is uninterrupted, nay, it acquires strength from duration; its impressions are made more lasting by reflection, and the means generally employed to turn its keen edge, answer little other purpose than to convert it into fixed melancholy—the wretched harbinger of the whole train of nervous complaints, and too often of the consummate of human misfortunes, the deprivation of those faculties which distinguish the human race among the works of God.

In vain are we told that misfortune is the lot of mortals; in vain are we taught that we ought to bear the common ills of life with serenity, and submit to the dispensations of Providence with resignation: we admire the precept, but look for the example, and discover in the conduct of the preacher himself, that lessons applied to the human passions are admirably calculated to instruct the by-stander, but are wholly inefficacious to relieve the distresses of the afflicted, or to convey peace to the children of woe.

Yet are we not to permit the mourner to sink under the weight of his calamities, without some attempt to remove the pressure of misery, or alleviate the burden of wretchedness.

In the first attacks of affliction, seek not to stem the torrent; let sorrow have its course, and soothe the mind rather with participating the cause, than by endeavouring to prevent the effect. In the violent perturbations of anguish, nothing tends so

much to quiet the spirits, as an apparent division and communication of misfortune: a surviving parent, overwhelmed with the loss of a beloved and affectionate partner, hath often been brought back to reason and resignation, by the embraces and tears of a darling child, when arguments of religion have been fruitless, and the efforts of condolence unavailing.

When the tumult of passion subsides, when nature, tired with the conflict, surrenders the sufferer to the necessary though unwelcome approach of sleep, watch the moment of waking with the most friendly attention; observe the change wrought by this suspension of sorrow, and guard against the violent return of it, by introducing interesting subjects, and awaking the mind to the avocations of business, parental duties, or offices of humanity, to which it is in such moments peculiarly disposed. Having succeeded in diverting the stream, the difficulty of drying it up will be lessened: from business, proceed to amusement; engage the faculties in constant employment; and as the object of grief presents itself less frequently, the effect will be less severely felt, till its poignancy be softened to regret, and the recollection produce sensations of melancholy pleasure.

But when grief does not arise from any immediate stroke; when it is occasioned only by disappointment, and an untoward combination of the common occurrences of life; we must ourselves exercise the reason with which we are endowed: since to yield to such calamities, is to arraign the dispensations of Heaven, and repine at being subject to the ordinary accidents of mortality.

The effects of grief will soon become visible on the strongest constitution; loss of rest is succeeded by loss of appetite, the necessary consequence of which is indigestive flatulencies, depression of spirits, relaxation, constant pains in the head and side, and slow or intermitting fevers: yet these are but the distant

distant consequences; the first and more violent impressions occasion frenzy, suffocation, lethargy, and death.

To obviate the deplorable effects last mentioned, we have already offered the best directions which occur to us: to remove the canker when it is slowly, and almost imperceptibly gnawing it's way to the heart, change of air, and of situation, objects and employments, are the best remedies that can be recommended. Where the condition of life prevents our seeking the cure by these means, others must be substituted; the attainment of any particular kind of knowledge; the acquirement of excellency in arts, science, or mechanics, may be suggested; and when the attention once begins to fix on a new object, it will naturally draw off from the old, the mind will collect itself, and exercise it's powers in eager pursuit of the pleasure which it expects to derive from this untasted source, and will soon resume it's vigour, and expel the disagreeable and dangerous intruder.

But when grief has been suffered to prey too long, when it has been too deeply rooted to be dispossessed by the charms of variety, or the common expedients of travelling, amusements, and company; the efforts of argument have been sometimes used with success: and comparison with others suffering with fortitude the same species of calamity in a more eminent degree, has in some instances been known to excite emulation, and lift the desponding victim from the regions of despair, to those of expectation, hope, and reliance.

Nor should the duties of religion be omitted; a due application to, which will dispose the mind to submit without murmuring to the ordinary decrees of Providence: but let it always be remembered, that cheerfulness is the result of perfect resignation, and that a melancholy and broken heart, must be a very unacceptable sacrifice to that God, who animates universal nature with the light of his countenance,

who makeeth the mountains to rejoice, and the valleys to laugh and sing.

The christian religion is of all others best calculated to support us under the various afflictions of life; the great example before us, should inspire our souls with resolution to combat the evils allotted to us here, that we may have fit dispositions to participate in those joys, which, if we chuse to entitle ourselves to them, are prepared for us hereafter.

The effects of joy, though by no means so common, are not less dangerous than those of grief; whatever acts upon the mind with a sudden and violent impulse, operates like anger, in promoting an improperly hasty circulation of the blood, and producing all sorts of inflammatory disorders; nay, the immediate consequences have been very often fatal; not only to the senses, but even to life itself: and we recollect an instance of a woman in childbirth, who being informed that her husband had succeeded to a fortune as immense as it was unexpected, fell at once into a state of insensibility, from which she awoke in a high fever, accompanied with delirium, which at the end of three days put a period to her existence.

When, therefore, the accession of fortune, or any other unforeseen event, elates the mind to an extraordinary degree of pleasure, it will be necessary to direct the course of joy to proper objects; to represent the mercy of God, as the only fountain from whence our blessings flow; and to excite a due degree of thankfulness to the Author of our happiness, and a proper communication of the gifts we have received to those around us.

Why fear should be treated as a natural passion, we confess ourselves wholly unable to discover; a sense of danger, and an earnest desire to avoid it, no more describe the sensations of fear, than paint on the cheek denotes a fever, or a glove characterises the colour of the skin.

Fear arises from some impression made upon

upon the mind by exterior objects, and is either begot by representation, apprehension, or actual suffering. The Wild Man, found many years ago in the woods of Germany, thrust his hands into the first fire that was shewn him, without the least notion of it's being hurtful; but he felt the smart, and carried the remembrance of it to his grave, in an aversion to that element. The Indian surveys a gun with pleasure, examines it's parts with curious attention, seems delighted with the smoothness of the barrel, and the mechanism of the lock; he pulls the trigger, is seized with horror at the explosion, drops the instrument of terror at his feet, and flies for shelter to his native forests. He who has never heard of the deleterious effects of the small-pox, feels no apprehensions of being attacked by the disease; whilst he who has had the loathsome progress of it painted in description, and the melancholy consequences pointed out in example, shudders at it's approach, and overwhelmed with fear and anxiety, sinks under the disorder, which perhaps is alone rendered dangerous by the disposition of the patient's mind.

If we divest the impulse of fear of the character it has hitherto received, and instead of considering it to be an instinctive and natural passion, attribute it to causes induced by circumstances, and evident to our senses, we shall feel ourselves much less at a loss to obviate or prevent dangerous impressions, and to remove the effects, which are often of a very alarming nature.

From infancy, a most nefarious custom prevails, of subjecting the tender mind to the influence of terror: the crying child is quieted by the threats of calling bugaboo, or bloody-bones; in the advances to youth, tales of ghosts, sprites, and hobgoblins, are continually introduced; and the mind thus early habituated to fearfulness, scarce ever gets over the fatal tendency.

The absurd pleasantries, so commonly practised among young people, of fright-

ening each other by fantastic dresses, ghastly masks, and other devices of the like kind, is often attended with consequences of so serious a nature, that if they were at all noticed, jokes of this sort would be much less frequent; instances can be found of some persons losing their lives, and many their senses, by this species of mischievous wit.

Tales of horror are the common entertainments of a sick room. Is a woman in child-birth—every story of hard labours, consequential disorders, and unnatural births, is industriously recollected, and recounted with all the accompaniments of woe, and expressions of pity. Is the patient feverish—delirium, frenzy, and every aggravating symptom, are the usual topics of conversation; nor can we altogether acquit the physician himself of contributing to the prevalence of this unnatural custom, when by shrugs, and nods, and winks, he denounces his apprehensions of danger, and meaning only to convey reasonable doubt and anxiety, is understood by the sick man to pronounce a sentence of death, which his own fears too often carry into actual execution.

Sudden fear produces violent effects: epilepsies and convulsions are frequently occasioned by it; and many a noble fabric of health hath been destroyed in a moment, by a false alarm, an unfounded tale, or a ridiculous and miserable attempt at mirth and humour.

But where it fails to act with such immediate violence, the impressions may be equally injurious, and are in general lasting; the nervous system once affected is hardly ever perfectly restored, and hysteric, hypochondriac, and melancholy, are the wretched companions for life, of those who escape the more suddenly fatal consequences.

To avert the certain dangers which await the impressions of fear, banish from the nursery and the school-house the idle fictions of supernatural appearances; and

from the sick-room the unmeaning tattle of similar cases and melancholy events. Let children be taught, that the only real cause of fear originates in vice, and that virtue will recommend them to the care of that Being, without whose permission no evil can befall them. Let the dangers of particular disorders cease to be the subject of ordinary conversation before those who are

peculiarly liable to their attacks; and let the business of the sick-room be confined to proper attendance on the convalescent, and a due regard to the case before us, without adverting to others, for no other purpose than to harass a mind already brought low by indisposition, and to add to the miseries of disease, apprehensions of a fatal catastrophe.

CHAP. II.

Of different Avocations and Employments.

THE avocations and employments of life may be divided into the *sedentary* and the *laborious*; among the former may be classed study, all the fine arts, many branches of mechanics, and every common business which is performed by the hands in one particular spot.

Among the latter, agriculture, other branches of the mechanics, and engagements in the public, military, or naval service.

A close and intense application to study, a fixed and constant habit of thinking, and a perpetual strain of the faculties of the mind, is equally destructive of the health, and subversive of the understanding. To the monk of some austere order in his cell, study may be relaxation; but for the man of the world, for him who has engagements of a social and domestic nature, to dedicate his whole time to literature or science, is to pervert the designs of Providence, and to advance works of doubtful or speculative use, at the expence of health, comfort, and the active duties which he owes to the society at large, and to his family in particular.

Not that we would be understood to discourage the advances of learning, or the discoveries and improvements of science; on the contrary, we are of opinion, that every man whose rank and situation in life

have given him the advantage of education, may with equal benefit to himself and the community, employ a portion of his time in those delightful avocations, and contribute to the volume of literature, without injury to his health, or prejudice to his fortune.

When we consider that the vital motions of the body are under the influence of the mind, and are either hastened or retarded by it's immediate disposition, we shall be at no loss to conceive, that the cheerfulness and sprightliness of the one, will add to the vigour and activity of the other; and that a dull, phlegmatic, and unhealthy body, is a fit receptacle for a plodding, ruminating, and gloomy soul.

But the common and constant effects of excessive application to study, are indigestion, loss of rest, disorders in the liver; from thence jaundice, loss of appetite, and consumptions; stone, gravel, apoplexies, palsies, nervous and hypochondriac complaints, and melancholy.

Reading or writing by night, without due precaution, occasions sore and weak eyes, accompanied with defluxions and violent head-achs.

Stooping to a desk or table throws the contents of the stomach and bowels forward, obstructs respiration, and produces inflammations

inflammations of the lungs and cholic, and other intestinal disorders; and leaning against the breast injures the functions of the heart, obstructs it's motions, and is attended with the most fatal consequences.

To such whose inclinations only lead them to studious employments, and who are by fortune and circumstances in life enabled to arrange and intermix their sedentary and active engagements, few cautions are necessary; they will fly from men to books, and from books to men, the moment either becomes tiresome; and their choice of correspondence with the living or the dead, will effectually secure them from suffering their health to be injured by the one, or their morals corrupted by the other.

But where study is the business of life, and literary employments are works of actual necessity, and a large proportion of time must be devoted to the pursuits of the mind, rules may be laid down, and certain regulations established, which may tend in a great measure to obviate the evils, and lessen the dangers, which will unavoidably attend a course of constant and uninterrupted study.

Let a part of every morning be spent in riding, walking, or in some other exercise in the open air. Break off your studies every second hour at least, and unbend your mind, if but for a few minutes, with conversation, family concerns, parental or other domestic offices, or music; go into mixed, nay, rather than fail, into trifling company, for some part of every day or evening; avoid returning to your book or pen immediately after a meal, and if you read or write by night, use a shade or spectacles, and place your candles at some distance from your book or paper.

Fix on a place of study as airy and light-some as possible, and vary your posture frequently: if you read, you may sometimes walk with your book in your hand; if you are engaged in writing, move occasionally

to the opposite side of your table or desk, and accustom yourself to write either sitting or standing; the latter posture is least injurious.

Some regard also is due to the food and drink of the studious; meats hard of digestion, sour, windy, or highly spiced, should be avoided; the suppers should be light and early, and the liquors such as are well concocted; and where the stomach will bear them, acids in moderate quantities are of peculiar service.

By attention to these easy and practicable rules, the labours of the mind may be prevented from being destructive to the health of the body; and he whose life is devoted to the exercise of genius, may reap the fruits of it without being deprived of all the comforts which are worth his attainment.

The fine arts, such as painting, sculpture, and engraving, are properly sedentary employments; the exercise is confined to the hands, and the mind is actually engaged more than the body. Watch and clock-makers, chasers, and a variety of other ingenious mechanics, come also within the description of sedentary persons; and the same regulations and advice may be applied to them, which has already been offered to those employed in the studies of science and literature.

But there are other mechanics, of a lower class, who depend on the labour of their hands for the means of existence; and the profits of whose trades are so very inconsiderable, as to render it absolutely necessary for them to employ every hour of the time, which is not actually required for the ordinary refreshments of eating and sleep, in unremitting attention to the duties of their respective callings.

Yet the dangers attending persons even in this situation may be averted, and the fatal consequences of a life of inactivity may be rendered less terrible, by availing ourselves of such means as offer to obviate the want
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of more frequent exercise, to promote a regular circulation of the blood, and to procure a constant supply of fresh, or at least more wholesome air, than such mechanics are usually accustomed to breathe.

For these purposes we shall earnestly recommend cleanliness, as in some measure an efficacious substitute for exercise: let the industrious, but sedentary mechanic, accustom himself to wash not only his face and hands, but his head, neck, and behind his ears, with clean and cold water, every morning, before he betakes himself to his occupation; let him set open the windows, and even doors of his room, as often, and for as long time, as the season will admit; let him avoid an absurd custom of crouding his windows with garden-pots of herbs and plants, to the exclusion of air, and the introduction of unnatural damps; let him take his meals standing, or walking about; and if, to a strict observance of these rules, he will add an evening walk of an hour, instead of spending that time at an alehouse, he may ensure to himself a tolerable share of health and vigour, and may pursue his employment closely, without incurring the danger of being incapacitated by diseases, or the premature approaches of the infirmities of old age.

In the exercise of some particular trades, convenience has made it necessary to confine a number of artificers to work in the same room, where they repeatedly breathe the same air, wasted and vitiated also by the addition of a number of candles, for many hours together; and then rush at once into the cold, perhaps damp air of the night, when their bodies are actually fitted to receive infection, and disposed for fevers, and other inflammatory disorders.

To break through a custom, which though pregnant with mischief, is yet attended with circumstances of considerable advantage to the employer, and is also in some measure pleasant and agreeable

to the mechanic himself, may be a matter of some difficulty; but the bad effects of this usage may be in a certain degree prevented, by placing a funnel of tin in the middle of the room, with an outlet to the open air, and disposing the candles around it, in such a way as to permit a considerable portion of the foul air to pass off; and thus a ventilator may be procured of very simple construction, and at a trifling expence, to purify the room by night: by day, throwing open the doors and windows will answer the same purpose.

The posture in which taylors, stay-makers, furriers, and some other artificers, sit to work, with the legs cramped up under the hams, is extremely prejudicial to health, obstructs the circulation of those parts, renders them weak and feeble, and frequently occasions a total loss of the use of the limbs; and the pressure on the bowels by a continual bending figure of body, brings on cholic and flatulencies, and often produces an habitual costiveness, at all times disagreeable, and in many instances extremely dangerous.

Whether such unnatural and constrained postures are absolutely requisite to the performance of the necessary business of these particular artificers or not, we are unable to determine; but we are inclined to believe, that a great part of their labour might be compleated in a situation more comfortable and less injurious to health.

There are also certain occupations, which are in themselves extremely prejudicial to health; painters, miners, plumbers, tallow-chandlers, chymists, founders, glass-grinders, and several other artists, are hurt by breathing unwholesome air, so loaded with noxious and poisonous exhalations as to be rendered unfit to answer the great purposes of respiration; and persons who follow these employments, are peculiarly liable to asthmas, coughs, and other complaints of the lungs; and to palsies, vertigoes, and a variety of nervous disorders, which

which frequently prove fatal in the very early periods of manhood.

To prevent as much as possible such melancholy consequences, every exertion should be made, and the utmost pains taken, to discharge the smoke, stench, exhalations, and fumes, and to admit a constant change of fresh air in places appropriated to the exercise of such trades; the labouring artificer should work but a few hours at a time, put on his cloaths the moment he discontinues his employment, and by no means go into the open air till he is cooled. He should avoid drinking cold water, or other weak liquors whilst his body is heated by violent exercise; nor should he eat fruits, or raw vegetables, which may be cold on his stomach.

By way of preventive medicine, a piece of rhubarb chewed now and then, or a table spoonful of sweet oil taken in the morning, will be found extremely useful; and those who work on metals or minerals, should wash such parts of their skin as are exposed, and change their cloaths before they eat.

Those who follow the employments of husbandry, are in general healthy; at least, they are less liable to particular disorders than those who are confined within doors and in certain positions, and are subject to the inconveniences arising from putrid air and offensive effluvia.

Yet even the occupations of agriculture, the places where they are carried on, and the necessity of their being pursued, without regard to the severity of the season, or the inclemency of the weather, expose even the husbandman to the complaints incident to heat, cold, and wet, and occasion fevers, agues, quinsies, and rheumatisms; besides that continued hard labour, violent exertions of strength, and the carrying heavy burdens, overtraining the vessels, bring on asthmas, ruptures, and universal debility.

There are also other dangers to which

men of this condition are apt from carelessness or obstinacy to expose themselves; such as sitting or lying on the damp ground during the time they are in violent perspiration from labour: sleeping in the sun also, instead of procuring the refreshment sought after, is productive of fevers, and all other inflammatory disorders. The recesses from labour, which is a necessary indulgence in the extreme heat of the day, should always be enjoyed within doors, or under the shelter of some cover, which may protect the labourer both from the fervid rays of the sun, and from those changes of the air and unexpected showers, which frequently happen in the season of harvest, and surprising him asleep, will not fail to occasion some kind of fever, or at least a cold and rheumatism.

Nor is the carrying heavy burdens always a work of necessity; it is sometimes the effect of absolute laziness, and sometimes of a ridiculous vanity to outdo others in feats of strength: but from whatever motive it is attempted, it is seldom unattended with some fatal consequence; such as spitting blood, violent pains in the side, or weakness in the loins.

Blacksmiths, ship-builders, carpenters, and men who labour in other employments where great bodily strength is required, and a constant exertion of it necessary, should be cautious not to keep their muscles a long time together on the strain: in such very laborious trades, frequent rest is needful; and a precaution which very seldom occurs, of adapting the trade to the strength of the body, and the vigour of the constitution, is particularly recommended to parents, and others, who have the care of putting youth abroad in the world. How little this is attended to, may be discovered by our frequently observing a robust sturdy fellow, of six feet high, handling a needle; and a little, puny, half-formed mortal, smiting at the smith's anvil.

Acts of extreme imprudence, and of the

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most dangerous tendency, are frequently committed by common labourers, either for want of knowledge or consideration; in the midst of the most violent perspiration, they swallow large draughts of cold water, or, what is infinitely worse, of weak and sour small beer; they lay down to sleep, or sit to eat and drink, with wet cloaths about them; and when they return from the field cold and benumbed, they fly instantly to the fire, or plunge their hands in warm water.

The consequences of the former acts of imprudence are partial inflammations, the erysipelas or St. Anthony's fire, and other disorders of the same sort; and they suffer by the latter kind of folly in chilblains, whitloes, and other diseases of the extremities, from which such people are hardly ever free. Yet if they could be prevailed on to suffer the inconvenience of thirst for a few minutes, and the disagreeable sensations of extreme cold till the animal heat could be restored by rubbing; or if they would wash the benumbed part in cold water, or rub it with snow, and afterwards dry it with a cloth; they would not only avoid these complaints, but prevent others still more painful, dangerous, and alarming.

The ordinary food of the lower classes of mankind, is by no means calculated to promote or preserve health; it is either hard and indigestible, or crude and windy; their very bread is frequently unfermented and ill baked; and their drink, stale and weak beer, sour milk, cyder in some parts of England, and in others milk and water: from such an unnatural and unwholesome mixture, arise twistings of the guts, cholics, and other complaints of the bowels; nor, where poverty and inattention prevail, is the evil easily remedied. The best advice that can possibly be given, is to boil the animal food which falls to their share well, and make broth and pottage from it, with plenty of vegetables; this will constitute a

cheap and wholesome dish, rendering the flesh more light of digestion, and the vegetables less flatulent and griping.

Nor are the ordinary husbandmen at all regular in their hours of eating; sometimes spending the whole day in the severest labours of the field, without any sustenance; and making but one meal, and that at night, in the whole twenty-four hours; this is a neglect of a most pernicious nature; the animal juices and humours exhausted by hard labour require to be frequently replenished, lest they become putrid, and occasion the worst of all fevers.

Such people seldom work at so great a distance from their habitations, but that warm food might be carried to them by the wife or children in the middle of the day, which would not only be a most agreeable refreshment, but prove highly contributory to the preservation of health; and to the abatement of the fatigues attendant on a life of daily labour.

But the scanty earnings of manual labour are often insufficient to supply the wants of a numerous family, and poverty of living vitiates the humours, and is frequently productive of itch and other diseases on the skin; and the general ruinous and crazy state of the cottage inhabited by the labourer, and the want of cleanliness which too often accompanies poverty, may be considered as additional aggravations of the dangers to which this class of people are liable.

But, above all, the want of necessary food and comforts, and of medicine in the hour of sickness, are the most deplorable circumstances to which a human being can be exposed: justly celebrated as this country is for public institutions of charity, we cannot omit this opportunity of exhorting the benevolent and humane, to look into the private dwellings of the indigent sick; to minister to their wants, to relieve their necessities, and to supply them with such medicines as their disorders require, (a task which

which we trust the work now in their hands will enable them to perform;) and so shall they follow the precept of their divine teacher, and entitle themselves to the favour of God, and the blessings and prayers of their afflicted fellow-creatures.

The employment of a *soldier* kept to the strict exercise of his duty, is at all times laborious; in actual service much more severely so, than that of the artificer, the mechanic, or the husbandman: exposed like them to the fatigues of carrying burdens, and to the inclemencies of the weather, soldiers suffer the additional hardships of unwholesome climates, bad provisions, hunger and thirst; are harrassed with long and tiresome marches; lie down to rest on wretched beds, from whence they are called by frequent alarms; and even their sleep is broken, interrupted, and unrefreshing.

When armies are obliged to keep the field during the fall of the autumnal rains, or in the rigour of winter, disease proves more destructive than the sword; rheumatisms, agues, fevers, and fluxes, are worse enemies to combat with, than those who are opposed to their ranks; and a long and inactive campaign, is often more fatal than two or three sharp engagements.

The humanity of those officers can never be enough commended, who from their own purses (a practice by no means uncommon at this time) furnish the soldier with a better supply of shoes and stockings than the miserable pittance of his own pay will afford: the comforts of a change after a wet and dreary march are inexpressible, and the advantages resulting from it, will be the preservation of health, and the performance of the severest duty, with spirit, alacrity, and cheerfulness.

The soldier who protects our properties, and preserves for us the invaluable blessings which we derive from our present happy form of government, should be the peculiar object of our care. Commanders should be

attentive to see that the cloathing provided for the military be good in it's kind, and regularly delivered; that they are not unnecessarily exposed to the hardships of a winter encampment; and that they are provided with good quarters; the conveniency and comfort of which will in a great measure depend on the discipline, order, and sobriety of the men.

In times of peace, idleness and intemperance may be as detrimental as the hardships of actual service; the dangers arising from both may be avoided by strict attention to discipline, and indulging some of the most industrious in working at such trades as may not disqualify them for the duties of a soldier. We remember two regiments in the same quarters of cantonment, one of which was as remarkable for keeping the men to hard field duty, as the other was for relaxation in that particular; the consequence was, that the active corps remained in perfect health, whilst the other had seldom less than a third of it's number in the hospitals.

We would also earnestly recommend a laudable custom, which prevails in many regiments, of dividing the companies into messes, under the care of a serjeant or corporal, to procure their food and get it dressed; and of appointing a commissioned officer to go round to the quarters daily, at the appointed hour of dinner, to inspect and examine both the quantity and quality of the provisions: under such regulations we have observed with pleasure the most perfect appearances of health, order, and satisfaction.

But if the soldier may be very properly numbered amongst the laborious, how much more justly may the *seaman* be ranked in the same class: condemned to constant confinement within a very narrow and limited space, exposed to the violence of tempests, the vicissitudes of heat and cold in various climates, continual salt, and frequently bad provisions, total want of vegetables,
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and stinking, unpalatable, and unwholesome water!

Owing to these causes, the losses which are sustained among this most useful and necessary body of brave and adventurous men, are almost incredible; yet these have ever been considered as the unavoidable consequences of long cruizes and voyages; for provisions will naturally decay, the best beef and pork will corrupt, the water spoil, and the beer (at least such as the navy is supplied with) will not keep good for any length of time: of course the long and constant use of such provisions and liquors, must by degrees taint the juices of the body, produce great acrimony in the blood, and dispose it daily more and more to a state of putrefaction; and these effects will be considerably augmented by living continually in a salt moist atmosphere, and breathing the foul polluted air between the decks of a ship. Constant experience shews this to be the case. After a squadron has made a three months cruize, the men become highly scorbutic: the fleet returns into port; fresh air, wholesome liquor, fresh provisions, and especially proper fruits and herbs, purify the blood and juices of the sick, and health is restored with amazing rapidity.

That the state of the blood in the seascurvy is acrimonious and advancing to putrefaction, is evident from the common symptoms of this disorder; which are, stinking breath, corroded gums, high coloured and foetid urine, ulcers, black, brown, and blue spots, and eruptions on the skin; feverish heats, foul tongues, bilious dysenteries, and bloody fluxes: and it is also well known, that a vegetable diet and regimen, fresh air and provisions, and vinous or acid drinks, are a certain and speedy cure when the disease is not too far advanced. Apples, oranges, lemons, and other fruits which will bear carrying to sea, have been often known to effect surprising cures in scorbutic cases: and it is certain, that what will cure will also prevent; be-

cause the officers, who are accustomed to lay in considerable stocks of fruit, and to use wine and acid liquors freely, are infinitely less afflicted with the scurvy than the poor common sailors, who are not so well provided.

Perhaps it may not be practicable to introduce such a general regimen into the navy; but whatever can be done towards it, should by no means be omitted.

Various roots, grains, and fruits, may be kept for a considerable time at sea; such as potatoes, onions, cabbages, and apples; and a large quantity of each may be purchased at a very inconsiderable expence, and ought to make a part of the ordinary provision of every ship of war: and as apples have been found of immense service, surely the juice of them, when reduced to a vinous liquor, must be salutary, and seems well calculated to correct, by it's acidity, the putrifying quality of bad and corrupt provisions. But the cyder should be at least three months old before it be served in, and be quite fine, and it should consist of the pure juice of the apple without adulteration; it should be once racked off from the lees into good and sweet vessels, which will contribute to it's becoming fine, and prevent it's growing ropy, in which state it is good for nothing. Cyder of a strong body, and well managed, has been known to keep good even to the East Indies; but if any of it should turn to vinegar, it will be equally serviceable, and, properly used, conducive to health.

Considerable quantities of flour might also be carried in every ship of war, of which new bread might at convenient times be made, and distributed in turn to the whole crew. New malt liquor, or wort unworked, is likewise an antidote against scurvy; and malt may also be provided for that purpose, which will keep some months in casks, placed so as not to be subject to damps or moisture.

But as acids act most powerfully against this.

this disease, a free use of vinegar should not only be allowed, but directed in the seamen's diet; and shrub, or the juice of oranges and lemons mixed with rum, may be kept a long time, and will prove infinitely more wholesome than the fiery British spirits with which the navy is supplied, and even these might be corrected by the addition of lemon-juice or other acids.

Whenever opportunity offers, living animals and fresh provisions should be taken on board, not merely to furnish variety for the tables of the commander and other officers, but to be distributed among the crew, and in particular the sick: such a participation of anti-scorbutics would save the lives of many valuable seamen, who perish for want only of proper means to keep them alive till they could reach a port, in which case they would infallibly recover.

Sailors on duty are continually subject to get wet, and being of all human beings the most negligent and the least apprehensive of danger, give immediate way to the calls of sleep, and turn into their hammocks in the same condition they leave the decks; and this imprudent conduct is the cause of colds, rheumatisms, fevers, and even the hasty progress of the scurvy. If, instead of doing this, they were obliged to change their cloaths as soon as the watch is relieved; and instead of drinking spirits and strong liquors, recourse was had to such as are diluting, perspiration would be restored, and no ill consequences follow.

But the dangers of the seas, and of the disorders contracted there, are not the only ones to which seamen are exposed. When after a long voyage they get on shore, it is almost impossible to restrain them from every species of excess; they riot in drunkenness and debauchery, without regard to season, climate, or the conditions of their own health, till a fever stops their career,

and they fall sacrifices to intemperance and folly.

To those who visit climates peculiarly inhospitable to strangers, and particularly such coasts as are subject to thick fogs, heavy and continued rains, and great damps, the Peruvian bark may be recommended as the best, and indeed the only preventive medicine: the quantity of a dram of it may be chewed in twenty-four hours; or, if that method of taking it should be disagreeable, the following preparation may be substituted.

Two ounces of bark—one ounce of orange peel—and half an ounce of snake-root bruised or coarsely powdered. Infuse for eight and forty hours in two quarts of white wine or brandy.

Of this a wine glass may be taken at proper distances from eating, once, twice, or thrice in a day, and will be found a good antidote against fluxes, and the fevers incident to unhealthy and in particular hot climates.

It is impossible to conclude this subject without remarking, that although the methods we have prescribed for preserving and restoring the health of our seamen may be attended with some additional expence, yet it will fall very short of that which must be incurred in procuring hands to supply the places of those who are lost for the want of these precautions; and that the life of one skilful and seasoned seaman saved by providing him with the comforts and conveniences which we have pointed out, is of more real advantage to the service, than a dozen such men as can be picked up by a press-gang, employed at an enormous charge, and attended with the additional inconvenience of rendering useless in their own profession the number of men who compose it.

CHAP. III.

Of Air and Exercise.

ATENTION to these important articles in the preservation of health, is not only necessary to the sedentary and inactive, but to every human being that breathes and moves.

In vain are the regulations of regimen, and the prescriptions of physick; in vain the utmost efforts of preventive caution and medicinal assistance; if a foul and noxious air contaminates the very sustenance we swallow, and destroys the life-supporting operations of the lungs, and by degrees all the animal functions.

Yet if we look round us we shall see, that instead of endeavours to keep the air pure, and free from contagious and poisonous particles, every method seems to be adopted that may tend to replenish it with unwholesome and dangerous qualities.

In cities and great towns, the houses are high, and the windows small, and the streets for the most part narrow, and intersected by still narrower courts, alleys, and passages; in those confined places the most offensive trades are exercised, and the air, already loaded with the sulphur and smoke of continual fires, receives in addition, the exhalations and vapours which arise from tallow-chandlers, soap-boilers, compounders, chymists, preparers of oils and colours, foundries, and other noxious trades; and the putrid steams and fumes of dung-hills, slaughter-houses, and rotten flesh and fish.

Burying the dead in towns and cities is a most pernicious practice, such numbers of bodies putrifying so near the surface of the earth, and that surface so often disturbed and opened, cannot fail to taint the air, disperse contagion, and occasion the most dreadful diseases.

Still worse consequences may be apprehended from interment within churches; the air confined the whole week, stagnates and becomes putrid; on the Sunday the churches are crowded, a considerable degree of perspiration is excited, the lungs are employed in a much more than ordinary manner, and the air inhaled is vitiated, and the body prepared to receive infection. Wherever a number of people are pent up together, the air becomes unwholesome, and persons of delicate frames and tender constitutions feel the effects of it in sickness and fainting, which so frequently happen in churches, places of public amusement, and other assemblies, where the air receives injury from the breath, fires, candles, and perspiration.

Even the cautions of affluence, and the arts introduced by luxury to render the habitations of the wealthy impervious to cold, are extremely prejudicial: continual change of air is absolutely necessary to render it wholesome; nor should the doors or windows of any room be kept shut a whole day, on the contrary, they should be thrown open every two or three hours, and a free current of fresh air admitted.

The low roofs, small rooms, and narrow windows, of the houses inhabited by the lower order of people, are great enemies to good air; and the want of cleanliness too common in such habitations, renders it little less than pestilential; and as persons in this condition of life have no power of choosing airy situations, they seldom enjoy perfect health, such of them especially as are principally employed within doors.

In all places of confinement the air is peculiarly malignant from the breath of those whose state of body is inclined to putridity,

putridity, from the total want of exercise and poverty of living; fatal consequences have shewn the dire effects of diseases generated in gaols, and many valuable lives have been lost to society, whilst they have been obeying the dictates of conscience, or the calls of public justice.

Hospitals, and the apartments of the sick, are liable to the inconvenience of bad air: the former, from the numbers of necessity placed together; and the latter, from an opinion which is still too prevalent, though happily much less so than formerly, that the exclusion of air, and an extraordinary degree of heat, will conduce to the cure; though the truth is, that almost in every case, both the one and the other serve to render the disorder more violent, and add in no inconsiderable degree to the difficulty of removing it.

Stagnated air in mines is often the occasion of very melancholy accidents; and that which is pent up in unfrequented cellars, the bottoms of wells, and the holds of ships, will sometimes occasion the immediate death of those who are obliged to venture into such places. The spaces between the decks of ships, and particularly those parts which are appropriated for the seamen's sleeping places, are frequently filled with air of a very bad quality.

To remedy these inconveniences, so pregnant with mischief, is well worthy our attention; and though our utmost care may be ineffectual to procure good air, in particular circumstances, yet in almost every case some means may be found to render it less obnoxious to health and safety; and either to prevent it's being impregnated with pernicious matter, or to purify it in a certain degree.

In the metropolis, and in most other populous places in these kingdoms, regulations and improvements have been adopted within a few years, which have been admirably calculated to lessen this evil; but though much has been done, much

more remains to do: the removing the signs has had an excellent effect; but many dead walls remain in different parts of London and Westminster, and particularly at the ends of streets, courts, and alleys, which might be taken down with equal advantage; as in all such cases a current of air would be admitted to pass through, which is now impeded.

The width of the streets in all new buildings, should be fixed by legal authority, and the exercise of noxious trades and employments should, under a like regulation, be excluded from every populous town, and restrained within certain limitations as to time and place: such as are attended with much smoke or exhalation, should be carried on in very open places; and public slaughter-houses should be erected near a river, or other flowing water.

The suffering butchers meat or fish to be kept till it putrifies, should be forbid under very heavy penalties; such a law would answer the double purpose of preserving the purity of the air, and preventing the inhabitants from being poisoned with unwholesome food.

No accumulation of filth in dunghills or other heaps, should be permitted; and the emptying the necessary receptacles of human ordure, should be strictly confined to certain hours, and the contents conveyed to a much greater distance from habitations than is at present in use. Pits of a certain depth should be prepared to receive it, nor should it be suffered to remain uncovered.

Public burial-grounds should be provided at considerable distances from towns and large villages, in which all ranks of dead, without distinction, should be interred. The gratification of that species of vanity, which shews itself in the erection of costly and sumptuous monuments, may still be indulged; as the ostensible reasons for such erections are, the perpetuating the memory, and recording the virtues of the deceased, it is by no means necessary, that the tablet
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should be inscribed on the very spot where the remains are deposited; or if the avowed purpose of the tomb is to preserve the body from being disturbed, this may as well be done in a field as a church.

All public places of worship should be constantly aired, both by fires, and by throwing open the doors and windows; and this should be particularly attended to in the morning of the Sunday, or other festival on which the congregation are to assemble. And places of public amusement should be subject to the same regulations; ventilators have already been erected on many buildings appropriated to pleasure; nor do we apprehend the use of them would be at all improper in churches, and other places of divine worship.

Close rooms are extremely pernicious, whether rendered so by the size, or by the careful exclusion of air; the effect which sitting in a confined room has on the breathing, must have been perceived by every one: it is astonishing to conceive, that men should submit to a temporary suffocation, to avoid the inconvenience of a moderate degree of cold.

The ill-judged parsimony of low and small rooms, is attended with consequences of a very disagreeable nature; the air exhaled in breathing, reverberates from the low ceiling before it can be dispersed, and is drawn again into the lungs, so that a dozen people confined in such a room, are actually employed in swallowing the breath of each other; an idea which, however disgusting, is yet founded in truth.

The precautions which, to the credit of humanity, have lately taken place with respect to criminals in confinement, require still to be extended. The imprisonment of those who have offended the laws of their country, under the same roof, and within the same walls, with those who have forfeited their liberties by unavoidable misfortune, or those acts of imprudence to which even virtue is liable, is an outrage

on justice and common decency: nor should the untried or doubtful offender be subject to the hardships inflicted on the convicted culprit. Some discriminations are absolutely necessary in these cases, and will, no doubt, at a proper time, engage the attention of the legislature. Meantime, some regard should be had to the air, sustenance, and support, of prisoners of every denomination; for we are inclined to believe, that the pestilential fever, which has been usually distinguished under the description of the *gaol-distemper*, is in general occasioned by foul air, as well as by actual want of necessaries both in food and cloathing; and that separate apartments, a free admission of air, not only by the windows but by sky-lights, and trap-doors properly guarded to prevent escapes; regular, though coarse meals, and plenty of good water; would effectually prevent in future such horrid effects of the putrid gaol-fever as are recorded at different periods of history.

The same regulations with respect to air, are absolutely necessary in hospitals, and other charitable institutions of the like kind: particular diseases occasion very offensive smells; and the situation of such patients should be as remote as possible from those whose complaints are not attended with this disagreeable circumstance; and in particular, care should be taken, that the wards or apartments of the different sick should have no communication. Air in it's passage attracts parts of those bodies with which it comes in contact, and is often replenished with those of noxious quality; the same air, therefore, which passes through the apartments of those who labour under malignant or contagious diseases, should never be suffered to approach those whose indispositions are of a less malevolent nature. Caution on this head would entirely prevent the spreading of infectious diseases in hospitals, of which instances have occurred, where a fever hath been conveyed into the different wards, and hath been

been little less fatal than that which we have already mentioned under the name of the gaol-distemper.

The pernicious custom of excluding air from the chambers of the sick, is in some measure broke through; indeed, it is astonishing that it should have prevailed so long; many lives have no doubt been sacrificed to this absurd practice, which is equally dangerous to the patient and his attendants: fresh air, admitted by degrees with due caution, sprinkling the floors and furniture with vinegar and other acids, and fumegating with the flowers of lavender or other aromatic herbs, will prove more beneficial and reviving to the sick, than any cordial that can be administered.

The stagnated air in mines, may in some instances be discharged by explosion; and in others, by making larger and more frequent openings and communications, and by this means promoting a free circulation of air in the mine. Cellars which have been long unfrequented, and wells, may also be purged of the foul air by remaining open, or fixing a temporary ventilator; and fresh air in large quantities may always be admitted between the decks of ships in moderate weather, by throwing up the ports, or opening scuppers.

There are also many other cases and circumstances, in which not only the impurity, but the nature of the air may be prejudicial. The free air of the country is best calculated for those to breathe in who are troubled with asthmatic or consumptive complaints; but even in chusing a situation for the enjoyment of country air, some caution is required. Hampstead and Highgate hills may agree perfectly with one constitution, and contribute to a speedy recovery; for another they may prove too sharp, and the air of Chelsea or Kensington may be more salutary; the former will be found most suitable to habits less reduced, the latter to such as are more tender and delicate.

In the choice of situation for a country

residence, it will not be amiss to pay regard to the benefit of good air. High walls, and woods and groves, too near a dwelling-house, obstruct the free current of air, and render them damp and unwholesome; and such houses as are placed by standing or stagnate waters, of whatever magnitude, are unhealthy, because the air is continually damp, and loaded with putrid exhalations.

Gaols, prisons, hospitals, and all other buildings provided for the reception of numbers, should be erected in the open air, on elevated ground, and as remote from other habitations as conveniency will permit; and the emptying or collecting night-soil or other filth, should by no means be suffered in the neighbourhood of such buildings.

But the most healthy situation, the purest air, or the most constant change and regular enjoyment of it, will be insufficient for the preservation of health, without a sufficient degree of *exercise* to promote the regular circulation of the blood, assist the secretion of the fluids, and prevent the relaxation of the vessels or solids.

That the wrath of the Almighty is always tempered with mercy, may be gathered from the original denunciation, which condemned the children of men to earn their bread by the sweat of their brows; for we find the curse of hard labour converted to a blessing, in procuring the advantages of sound health and vigorous constitutions to those who are daily exercised in it; whilst those who are indulged in the gifts of fortune, are debauched by luxury, and derive no other benefit from the distinction, than to pine in palaces, and languish on beds of down.

The disuse of exercise, or a disinclination to it, begins with a pernicious custom of lying late in bed, and losing some of the most precious hours of the day in unnecessary indulgence, and in acquiring a habit of inactivity: to a man of business,

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who remains long in bed, his day is so far consumed before he enters on the duties of it, that he has no time for exercise; and to the mere man of pleasure, it serves as an excuse for not doing that, which from being accustomed to neglect, he has no inclination to perform.

Hence you will find the unfortunate artificer, who is confined by necessity to one fixed spot, and the man of rank and fashion, who consigns himself to the same life of indolence, involved in the like calamities; the days of the one cut short by diseases which he is unable to avert, and those of the other rendered miserable from disorders which he has entailed on himself by the folly of his own conduct.

Pains in the stomach, wind, indigestion, disorders in the liver, kidneys and other glands; and hypochondriac and nervous complaints; are the common and natural consequences of a life of inactivity: nor are those complaints to be prevented or removed by lolling in a coach, or being danced along the streets in a sedan-chair. Nature has disposed the whole race of animals to motion, and inspired them with a desire of using exercise; the young of every species, and children in particular, are impatient of confinement or restraint: in this propensity all other animals are indulged; man alone, from his own choice, is denied the means of establishing health, and enjoying the comforts of a robust and vigorous constitution.

Certain disorders render the use of exercise painful, and we have seldom regard enough to the most valuable of all our blessings, to procure it at the expence of even trifling inconvenience. If men would struggle to move about at the first attacks of the gout, many of the fatal consequences of that disorder might be obviated: and for the rheumatism and sciatica, exercise will in many cases be found an absolute cure.

The increase of all the diseases which are incident to a life of inactivity, may, in the ordinary classes of mankind, be attributed

to the progress of manufactures; and in the higher ranks of life, to the introduction of excessive gaming; a vice equally subversive of principle, and destructive to health; debasing those who practise it to characters not in the smallest degree superior to common pick-pockets, and rendering their constitutions objects of that compassion which they do not deserve. Whilst country sports and rural exercises, constituted the amusements of the man of fortune, integrity as well as vigour of mind were the inhabitants of a sound body; but the modern employments of time in what are called the polite circles of life, are calculated to render men unfit for public trusts, incapable of private friendship, depraved in morals, dissolute in manners, and bankrupt not only in fortune, but in the most valuable of all possessions, health and constitution.

In every condition of life, some exercise may be used; the most industrious, or the most needy sedentary mechanic, will be repaid for dedicating some portion of his time to this most excellent preservative, as his labours will be less broken by indisposition, or interrupted by disease; the valetudinarian will find his account in betaking himself to it before the progress of his disorders hath rendered him incapable of pursuing it; and if the fashionable man will cease to pore whole nights over the hazard-box and dice, and employ the mornings, which are now appropriated to sleep, in wholesome exercise, he may retrieve his honour, and re-establish his health.

It is impossible to recommend exercise of any particular kind, which must always depend on circumstances, situation in life, and condition of health; riding, walking, working in the fields or gardens, manly sports in the open air, and the diversions of shooting and the chase, are adapted to such constitutions as have not yet suffered by the ravages of disease, or the effects of any species of intemperance: milder exercises, or
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some of these in a more moderate degree, may be better suited to debilitated habits; but, avoiding violence, too much can hardly be taken by men of any description. The exercises of the female sex are chiefly confined to walking, dancing, and riding.

But it should be observed, that exercise at particular times, and by fits and starts, will never answer the purposes of preserving or restoring health. A course as regular as circumstances will admit is absolutely necessary; some part of every day must be

spent in it; and that which is taken in the morning will be found most salutary: and those who are engaged in public offices and employments, and tied down to certain hours of attendance, will do well to abridge themselves of a certain portion of the time allotted to rest, for the purpose of employing it in exercise; in consequence of which they will find the sleep of fewer hours more sweet and refreshing, and pass through the toils of business with additional spirit and alacrity.

CHAPTER IV.

Of Food and of Temperance.

FROM the little regard commonly paid to the quality of our aliment, one might be led to conceive it of no great importance to health. We avoid rain, damps, and cold, with the most sedulous attention; we fly from contagion in the moment of alarm; we avoid the perils of the precipice, and the dangers of winds and waves, with the utmost care and circumspection; the sting of an adder, or the bite of a mad dog, fill us with inexpressible horror; yet we taint our blood with unwholesome viands, and contaminate our juices with gluttonous excess, without the smallest degree of compunction, or the slightest apprehension of the consequences; we continue to swallow poison, without considering that it must one day operate, and we meet the disease which brings death, without the least recollection that it is occasioned by our own imprudence or intemperance.

Yet if we reflect, that diet will entirely change a constitution, either restoring, by a proper choice and judicious use of food, that which was before in a distempered state to health and vigour, or by the improper quality or excessive quantity, reducing a

sound frame and habit of body to debility and disease; when we are assured that it will render the fluids more or less thin or glutinous, and brace or relax the vessels or solids, and in consequence determine whether the animal functions shall be performed with regularity, or obstructed and impeded; we shall be surprized at our own imprudence, and treat this subject as a matter of great concern.

Bread is the first grand article of our sustenance, and deserves very particular attention; and as the goodness of our bread depends on the corn, care should be taken both in the sowing and keeping it. If corn is taken into the barn in a damp state, it is always subject to a certain degree of moisture; and bread made with it will run heavy, and have a peculiar manna-like sweetness: this kind of bread is very apt to lie heavy and turn sour on the stomach.

If the corn has been exposed too long to the sun and wind, it will be deprived of some part of its nourishing quality, the quantity of flour will be lessened, and the least nutritious part, the husk or shell, will be increased in proportion.

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Nor is corn only liable to be spoiled in the field or the barn; it frequently suffers in the granary, both from being over-kept for the avaricious purpose of enhancing the price, and from practices too often attempted to increase the weight or bulk of it. Those who tamper in this manner with the healths and constitutions of their fellow-creatures, are objects of the severest punishment the laws can inflict.

Bread which is purchased of the common baker is often unwholesome; it is generally highly fermented for the purpose of increasing the apparent size, and it is almost constantly too little baked, lest it should decrease in weight; added to this, it is not always certain that the flour is free from pernicious adulteration, notwithstanding the heavy penalties justly levelled at those who offend in this particular.

Animal food was unquestionably designed for man; but it was also intended that he should use it whilst it remains fresh, untainted, and in its plain and natural state; and not that it be converted to food when it becomes putrid and offensive, or that it should be vitiated by high spices, rich sauces, and the voluptuous and deadly ingredients of a modern kitchen.

Even the vegetables with which our tables are supplied, should be fresh gathered; after they have been long out of the garden, the quality of the salts with which they abound is materially altered: in some instances, they evaporate or fly off, leaving the mass vapid and windy; in other cases they occasion fermentation, and eaten in that state, produce cholic, gripes, and inflammations in the bowels.

The manner of depriving those animals on which we are to feed of life, is also of some importance, rendering the meat more or less wholesome. Cattle heated by driving are in a very improper condition for slaughter, the blood of such beasts being already advancing to putridity, and the flesh growing rotten and offensive very shortly after they

are killed. And there are some practices of so abominable a nature, as to require very particular notice, such as beating the bodies of animals, as soon as they are stabbed, in order to disperse the blood by breaking the vessels, and preventing its flowing off, and so increasing the weight of the flesh; and blowing stinking air from the operator's mouth into the inner skin, or what is called the cellular membrane, to give the meat the appearance of fatness: such horrid methods of rendering food unwholesome, can hardly be mentioned without disgust!

Nor is it only rendered unfit for use, by management in the butcher's shop; the manner of feeding cattle is frequently improper: grass, green or dried to hay, is the natural food of the beasts of the field; oil-cakes, and other articles of an inflammatory nature, are commonly given to the stall-fed beast, which indeed add to the fatness, but deprive the flesh of its sweetness, and rob it of those nutritive qualities which it acquires from herbage; in the gathering which, the animal has the additional advantages of exercise and air, and being killed in a state of perfect health, is full of juices, and easy of digestion.

Of animal food, some kinds are unquestionably more wholesome than others. Well-fed beef and mutton is certainly to be preferred to veal or lamb, especially if the age of the ox does not exceed six years, and the sheep is not younger; the texture of beef acquires its perfect state of fineness and firmness at four or five years old, mutton not so early. The flesh of ducks, geese, and hogs, is said to be less easy of digestion than that of chickens, or other butcher's meat; though with respect to pork, the ancients were of opinion, that it is more nourishing than any other flesh, which may probably be the case, where those who feed on it use an extraordinary degree of exercise.

But however wholesome the quality of the animal food provided for our support,
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the arts of cookery pervert it's use, destroy the powers of nourishment, and reduce it to a mere vehicle for the conveyance of the most destructive matter into the human body.

Would men be content to eat plain roast and boiled meat, with a large proportion of vegetables, at regular hours and proper seasons, avoiding high soups and sauces, spices, and other provocatives of false appetites, one half the list of diseases would be struck out of the catalogue; nor should we so frequently be shocked with violent seizures and sudden death, which in many, if not most instances, is owing to high, voluptuous, and irregular living.

The quantity of food can be exactly ascertained by no other means than by the appetite, and the state of body and vigour of constitution; but certain regulations may take place, both with respect to that and the quality, very necessary to be observed, and which will certainly be attended with salutary effects.

The food of children hath been the subject of a former part of this work, and hath been so fully treated of there, that no farther directions are necessary on that head; what follows will therefore be applied to persons advanced to manhood, who wish to preserve the comforts of health, and arrive at old age with unimpaired vigour of constitution.

The first consideration should be, the nature and quality of our food; and the directions as to both will lie in a very narrow compass.

Corn, well sowed and preserved, made into bread moderately fermented and thoroughly baked; well-fed and proper aged animal food; fresh-gathered vegetables in great plenty; and the plain cookery of roasting or boiling, without the addition of any other sauces than the animal juices or gravy of the meat; will constitute a diet suited to those who are in perfect health,

and calculated to continue to them that inestimable blessing.

But it is not enough that we attend to the nature of our food; the times and manner of taking it are equally important; and the most wholesome diet may become destructive to health, by an immoderate or irregular use of it.

Never eat to satiety, or swallow a morsel after the appetite is so far satisfied as to cease it's craving; let it be remembered, that the calls of nature are exactly conformable to her wants, and that to load the stomach with more than it demands, is to impose a task on the digestive faculties, which they are unable to perform, and to lay the foundation of all those disorders which arise from repletion, and which are more numerous and dangerous than will be easily conceived: nor should the frequent, but moderate use of liquids, in the course of a meal be omitted; dry food is apt to render the humours viscid or thick, and excite scurvy, inflammatory fevers, and other disorders of the same kind; and, on the contrary, too much moisture, or large draughts of weak liquors, occasion indigestion, wind, and the whole train of consequent complaints.

Be content with one substantial flesh meal in twenty-four hours; but if a habit of eating suppers is so confirmed, as not to admit of being broken off without inconvenience, hard and heavy meats should be avoided: shell-fish, vegetables, and the lightest kinds of animal food, should compose this meal, which should be taken early in the evening, and some hours before retiring to rest.

The use of tea has so universally prevailed against argument and experience, that it would be in vain to contend against it; nor do we apprehend it contains in itself any pernicious qualities: the practice of making the infusion of it excessively strong, and pouring it down the throat

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boiling hot, must undoubtedly be productive of very fatal consequences; but softened with a proper mixture of milk or cream, and drank only moderately warm, and accompanied with eating, we are inclined to believe that a breakfast can hardly be found more suitable to these climates, where fruits, lemonades, or water, are of much too cooling a nature, however happily they may agree with the constitutions of warmer regions.

But the advantages of a well-regulated diet, are not confined to those in health; the cure of many diseases may be effected by it without the assistance of medicine, and though the effect of regimen may not be so sudden, yet it will be found more permanent than that of physic: milk and vegetables have eradicated scurvies, which have baffled the utmost efforts of medical art; and if a portion of our animal food was exchanged for a larger quantity of fresh herbs, and roots of the least windy kinds, that disorder, which has obtained the name of the *English malady*, as well as putrid and inflammatory fevers, and many other diseases to which we are peculiarly subject, would be much less frequent than at present, nor would they be attended with the same malignant and obstinate symptoms.

Regular meals contribute much to health. It is a common, but injurious custom, to breakfast on tea, eating little or nothing; and to defer the dinner till three or four o'clock, in order to dispatch the business of the day, in what is by this means called a long morning, that the evening may be dedicated to pleasure; the consequence is, that the spirits are exhausted, the stomach and bowels filled with wind, and the appetite either destroyed, or rendered so voracious, that a much larger quantity of food is swallowed at once than can be immediately digested: and these inconveniences are attended with another of a still more dangerous nature; the conscious satisfaction of being at leisure for the re-

mainder of the day, induces men to sit too long at table, and the glass is circulated to restore the spirits, of which they have been deprived, not by fatigue, but fasting.

The light and early suppers which we have recommended, will dispose the stomach for a good breakfast, to which the dinner should succeed at a reasonable hour; and the labours of the day, of whatever kind, whether those of the head or the body, should be divided between the morning and afternoon. Aged people will find it useful to take some little matter even between their meals; and members of the legislature, or attendants on the courts of law, stand in particular need of such refreshment.

But though we have advised a plain and regular diet, and total abstinence from high and rich sauces, yet where the stomach has been accustomed to such pernicious mixtures, the use of them should be discontinued by degrees, and the appetite weaned from them almost imperceptibly. Eat at first of one plain dish, and then taste another of high cookery; confine yourself, not to partake of more than two dishes at a meal, and you will soon find the plain food will be most palatable: the pampered appetite can only be satisfied with variety, but a single dish will content the hunger of health, and supply all the wants of nature.

To those who by situation of life, or exigencies of the public service, have for any length of time been confined to a scanty allowance of food, or to such as is of a coarse and less nourishing nature, farther caution is necessary: the change from such a diet to one more generous should by no means be sudden; and it behoves every one in such circumstances, to enter upon the course very sparingly; the transition, if not made with care, will be attended with a considerable degree of danger.

But if gluttonous excess is destructive to health, and if the nature as well as the quantity

quantity of food is important to the preservation of it, choice of our *liquors*, and moderation in the use of them, is still more so: many lives are sacrificed to the absurd pleasures of eating, but many more to the intemperance of the bottle, and to the inordinate use of a cordial, originally intended to "*strengthen the heart of man*," but perverted in the abuse of it to a sure and deadly poison.

The human body being happily composed of a due proportion of solid and fluid parts, fitted for the regular performance of the functions of life, whatever interrupts these functions must be subversive of health; and this species of intemperance will disturb and disorder the whole frame, and necessarily impair, and by degrees destroy, the strongest and best constitution.

Of all the vices to which human frailty is liable, that of drunkenness is the least pardonable. The plea of pleasure cannot be admitted in excuse of it, nor can it be palliated by the pretence of temptation. The very taste of wine ceases to be agreeable, when the fumes of it begin to affect the stomach or head: and the consequences of inebriety, are to unfit us for the enjoyments we seek; and, instead of enabling us to relish the wit or mirth of our companions, not only to disqualify us from partaking of it ourselves, but to deprive the sober part of the company of the rational joys of convivial conversation.

Intoxication, in a moral light, is a sin against sense; it debases human nature to a level with the meanest of the brute creation, dishonours the work of God, and renders useless the choicest gifts of his beneficence.

In a political view, it destroys the health, and subverts the understanding; the faculties are drenched into stupidity, and the body consumed with disease: and if he who is addicted to this destructive vice, would only turn his eyes on the votary to

it, and on the man of sobriety, every argument against the practice of it would instantly become unnecessary.

Let him observe the drunkard in the several stages of his transitory life, and he will find him in the outset bloated, suffocated, and inflamed; as he advances, feverish, restless, and uncomfortable, troubled with wind, indigestion, and a depression of spirits, only to be relieved by a repetition of the miserable cause of the complaint: he will find him racked with excruciating gout, and tormented with unceasing head-ach; as his shortened life draws to a period, he will be swelled with a dropsy, or emaciated by a consumption; choaked with phlegm, or torn to pieces with a hectic; and if he escapes being cut off in youth by the violent effects of intemperance, he arrives prematurely at old age in the prime of life, and death only releases him from the pains and torments which have been the acquirements of his own folly and imprudence.

Nor does his mind fare better than his body; the stings of conscience may be averted for a moment by the temporary deprivation of reason; the arrows of reflection may be turned aside by the riot and debauchery of the night, but sorrow "*cometh in the morning*;" and the first waking prospects which present themselves, are a shattered constitution, a broken fortune, an injured family, and a wounded reputation; objects too horrible to be endured, and yet only to be removed at the expence of plunging again into the same scenes which brought them to his view: and thus a continual course of alternate sin and repentance, fill up the wretched remnant of life, till it can no longer struggle against the united efforts of disease and despair.

On the other hand, let him remark the man of sobriety and temperance; in appearance manly, firm, and erect; in countenance florid and healthful: active and vigorous in body, serene and sprightly in mind,

mind, he passes from youth to manhood without disease, and advances to old age without it's infirmities; deriving comfort and happiness from the blessings of health, unallayed by the terrors of danger, or the consciousness of having deserved it; and after a life as free from pain, as the state of mortals will admit, gradually sinks without a pang, and exchanges it for a better, unconvulsed by the agonies of distemper, and undisturbed by apprehensions of the change he is about to undergo.

Drinkers of different liquors are afflicted with different disorders. He who sucks large draughts of malt liquor, is by that glutinous and fattening liquid blown up to a monstrous size, short-breathed, inactive, and disposed to diseases of the lungs. The immoderate wine-bibber is in a perpetual state of heat and inflammation; and he who is desperate enough to use quantities of spirituous liquors of any kind, swallows liquid fire, and carries about with him an unquenchable thirst, and an eternal fever.

Those hardy drinkers, who have by degrees habituated themselves to bear torrents of liquor, without being affected with actual intoxication, are yet equally subject to the fatal effects of their indiscretion; gravel, stone, gout, ulcers, and all the nervous and hypochondriac complaints, are their wretched companions through life.

To the honour and advantage of the island of Great Britain, this odious and destructive vice loses ground daily, among those whose example we trust may in time prevail to put a total stop to it in every class: and but for the introduction of a method of destroying time, almost as pernicious to health and morals—excessive gaming—we should flatter ourselves, that the decline of this still flourishing empire is at no inconsiderable distance.

But whilst we declaim against the vice of drunkenness, we would not be understood to mean, that wine should be banished from

the tables of the wealthy, or good and wholesome malt liquor from among the refreshments of the industrious; a few glasses of the former, generous and unadulterated, and moderate draughts of the latter, fine and of a proper age, may be as conducive to health, as the intemperate use of either will be prejudicial.

Common drink with our meals may either consist of water or table-beer: of the first, that which is pure, soft, and tasteless, is the most wholesome; that which arises immediately from the spring is to be preferred; river water, which does not tinge the banks or shores with any appearance of a mineral quality, is the next in goodness; but the waters of stagnate pools or ponds, are by no means to be used, being always in a certain degree corrupted and inclined to putridity.

Table-beer, if circumstances admit, should be brewed at home, because the composition is in that case certain, which perhaps is not always so with the production of the common brewhouse. We would also recommend that it should be of strength sufficient to pass through the fermentation, without the risque of growing sour. Over new and stale malt liquor are alike unwholesome; the former occasions wind and cholic, the latter acidities in the stomach and bowels, and indigestion. Table-beer, well prepared, properly kept, and moderately used, will in very few cases prove injurious.

But there is another species of intemperance not less destructive than either of those we have named: the passion which tends to the propagation of our species is too often perverted; and those desires, which were intended, under the regulations of reason, to contribute to the happiness of mankind, are suffered to become inordinate, to degenerate into vice and wickedness, and to become the source of a thousand ills.

One should be inclined to think, that the spectacles of horror, which are daily to be

be seen in our streets victims to carnal intemperance, would be sufficient to deter mankind from a course so big with every kind of ruin; yet are our hospitals filled with wretches marked with the most loathsome and painful effects of this excess; our gaols crowded with criminals, tempted in the gratification of it to the commission of the most enormous offences; our streets thronged with prostitutes, the unfortunate participators of the guilt; and youth of all ranks and denominations involved in scenes of the most shameless and abandoned profligacy.

Laws have been found ineffectual to curb the licentiousness of this passion, advice has been offered in vain, and precept has only taught to know, but not to avoid: example can alone prevail; if decency in this respect was observed by those who are of stations conspicuous, and of rank to command respect, they who now look up to and imitate their indiscretions, would in like manner copy their prudence, and the public stumbling-block being removed, reformation would probably follow.

Meantime, it is our office to warn those who are under the violent influence of lawless appetites, that the effect of indulging them is sure and fatal; that the least dangerous consequences will be weakness, inability, and early incapacity to enjoy them

at all; and the more deadly ones, those taints which contaminate the whole system of the human body, are hardly ever thoroughly eradicated, are painful in the endurance, difficult and obstinate in cure, and by frequent repetition, destroy the best founded constitution, and reduce the human frame to a lump of loathsome deformity; and not only render life itself a burden, but convey to the wretched posterity of the unhappy sufferer such a portion of misery, as to leave them little reason to remember with gratitude the author of beings, who are condemned, by the sins and imprudences of their parent, to suffer the pangs of undeserved disease, and languish through their lives without a hope of attaining the blessings of established health and vigorous constitutions.

Nor are these evils of a private nature only: as they tend to the corruption of morals, and to the depravity of the mind, so they also prevent population, and deprive the state of it's riches and strength; and from the united powers of both these causes, commonwealths of the first magnitude have been brought low, and the mightiest empires, overthrown: for no combination of political force, nor any arrangement of human wisdom, can withstand the force of universal degeneracy, profligacy, and vice.

CHAP. V.

Of Cloathing and Cleanliness.

IF we were to form our opinions of propriety from the customs and usages of mankind, the discussion of this article would engage but a very small portion of our time or attention. The manifest absurdity and infinite variety of dress, ancient as well as modern; the astonishing changes of fashions; and the different

modes of accomplishing the same purpose, from the monarch of Persia with chains and bracelets of diamonds, to the Hottentot of distinction ornamented with a larger share of animal entrails; would induce us to believe that the whole is mere matter of fancy, and that it is of no importance to health, whether, like the wretched New

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Hollander, we shiver naked in regions of frost and snow; or like the luxurious Asiatic, submit to accumulated loads of pompous finery in climates of eternal summer.

But if we suffer ourselves to act under the guidance of reason, instead of the influence of custom, a rational system of cloathing will present itself, suited to age, constitution, climate, and season; always maintaining the purposes of assisting Nature, at least taking care not to obstruct her operations in the promotion of perspiration, on the free and uninterrupted performance of which depends principally the health of the human body.

In youth, when the circulation is brisk, and perspiration necessarily copious; when activity and constant exercise keep the humours in a due degree of warmth; when the skin is tender, and the pores open; a less quantity of cloaths, and those of a light nature, will procure heat enough to assist the animal function: but as we advance in years, the blood flows sluggishly, the fluids cool, and the skin becomes hard, thick, and shrivelled, and more cloaths, and those of warmer materials, will be found necessary.

The robust, florid, or sanguine habit of body, will endure the cold without shrinking; whilst the puny, tender, and delicate constitution, is affected with every blast of wind, and looks forward to the rigours of approaching winter with fear and apprehension: that these two different frames require cloaths differing in degrees of warmth, may be discovered without any extraordinary sagacity, and this difference will be regulated by the exercise of common prudence.

But the respect which is due to climate in this particular, is a matter of very great importance; and perhaps many of the diseases which are considered as local, and of which men who visit different countries complain, as the effects of a sickly coast, or an unhealthy climate, do in fact owe

their origin to a relaxation of our attention to this article of cloathing.

It is a fatal mistake, that in warm climates greater liberties may be admitted in this particular, than in those more remote from the influence of the sun; yet it is no easy matter to obviate this prejudice, because it is founded on a compliance with our inclinations, and we are too apt to approve of what we find immediately agreeable, without regard to consequences, which by being somewhat distant, seem less intitled to our consideration.

But the fact is, that the custom in warm countries of throwing off the external garment the moment the wearer comes within a house, though he is at that instant sweating at every pore; the habit of chusing the most cold and airy part of the house to repose and refresh himself in such a situation; and the impatience of heat, which prompts him to expose himself to the cold and chilling damps of the night; are indiscretions of the most fatal nature: sometimes producing only the more slow and tedious disorders, but more frequently those which are immediate and acute.

In warm climates, the texture of the human body is so perpetually heated, that it is much more sensible of cold than in very temperate situations, and a cold blast of wind seems sometimes to penetrate to the very vitals. And if it be considered, that the means of preventing a great number of disorders, are the wonderful disposition which nature has provided in the animal œconomy for carrying off through the skin whatever is noxious or of no use to the human body, and of how much consequence this discharge is for that purpose, it will be readily apprehended, that the dress which is best calculated to secure that function from interruption, will be the most likely to preserve health.

But, on the contrary, it will be found equally prejudicial to load on such a quantity

tity of cloathing as may increase the animal heat; such apparel as will protect the skin from being acted upon by every cold wind that blows, and prevent the perspiration from being obstructed, is only meant to be recommended; and the same regulations are more particularly necessary with respect to bed-cloaths or coverings at night, when perspiration is always more plentiful, and indeed more conducive to health, than in the day.

The cloathing should also be adapted to the season of the year, and necessity will in general point out the proper times for the changes; but great care and caution should be used in making them: the transition from furs to silks should not be sudden; and, perhaps, there may be something more than caprice in the nice distinctions made by the French nation, in suiting different dresses to the various seasons of the year, and observing the times of appearing in them with such critical niceness.

But it is not only warmth that is to be consulted in the choice of cloathing; ease and convenience are articles of material consideration; and we cannot avoid condemning those fashions which demand a sacrifice of both, nor help feeling extreme regret at the sight of a beautiful woman putting health and life to the hazard, in compliance with the absurd customs of loading her head with a burden which nature never designed it to bear; and at the same time admitting the air to those delicate parts of her frame, which the same excellent guide would teach her to protect. We cannot but deplore the prevalence of vanity, when we see such figures as we have described led up to the altar of Vanity; nor shall we on this occasion forbear to admonish our fair countrywomen to set their charms in higher estimation, than to conceive they will derive additional lustre from a load of false hair, or the preposterous circumference of a modern fardingale.

The method of making and fitting cloaths

to the body, is also worth our attention; strictures of every kind are injurious to health, obstructing the circulation, and producing various diseases in the different parts, as they are subject to the restraint. When the neck is tied up with a collar or neckcloth, it occasions head-achs, giddiness, and even apoplexies: the stays of females are an unnatural constraint, and interrupting all the functions of the intestinal parts of the body, cause sickness, faintings, and coughs and disorders affecting the lungs; bandages on the limbs, such as garters or tight wrists, are productive of cramp, gout, and palsy; and strait shoes answer no other purpose than to cripple the feet, and bring on galls, corns, and foreness.

How far the construction of the modern European dress is calculated to preserve health, is a question which may deserve the discussion of some nice and critical observer; nor do we apprehend such a disquisition would be either unuseful or unentertaining; it might perhaps lead to some rational mode of covering the human body, equally free from the inconveniences of exposing it in any manner to the inclemencies of weather, and the dangers attending the unnecessary compressions which have been introduced by fashion and vanity.

But we cannot agree with certain ingenious modern writers, who recommend even uniformity of colour, and represent neatness, cleanliness, and elegance, as depending on the rejection of ruffles, laces, and trimmings: on the contrary, as we admire the colours of the rainbow, and are delighted with the various tints of a bed of tulips; as we observe with pleasure the enamelled streaks which "*lace the severing clouds,*" and find traces of order and design in the plaits and folds of the rose-bud; so we can discover no impropriety in an imitation of the beautiful works of God, or conceive that unornamented simplicity of garb is either conducive to health, or peculiarly pleasing to that Being, who

who has provided the eye of man with objects of eternal variety, from the snow on the mountain top, to the glossy jet on the raven's back.

In the original foundations both of the Jewish and Mahometan religions, *cleanliness* was a considerable article of the practice enforced; and considering the institutions respecting it as mere matters of policy, they are certainly replete with prudence, wisdom, and humanity.

Both religions were at first propagated among the lowest orders of mankind; and as men in this situation are in general compelled by circumstances to reside in narrow and confined habitations, where the air is polluted by being pent up, and rendered more noxious by the fumes arising from filth and nastiness, *prudence* suggested the inculcation of frequent purifying, as essentially necessary to the preservation of health; and it might be an argument of considerable weight in the extending these religions, that those who embraced them were evidently under the more immediate protection of Heaven, in the enjoyment of the chief blessing of life.

As these religions prevailed, and populous towns and cities followed the doctrines of them, the *wisdom* of legislators added the sanction of law to the precepts of religion; and sensible that the removal of impurities from the person, did but partially effect the purposes of cleanliness, they made wholesome provisions for the maintenance of it in many other respects.

And when the causes and cure of diseases became subjects of enquiry and more minute investigation; when discoveries were made, that certain diseases were contagious; and experience had ascertained the modes and degrees in which infection might be communicated; *humanity* became interested in putting a stop to the progress of it, and pointed out attention to this important article as the probable means.

Of all the classes of mankind, manu-

facturers, and mechanics of certain denominations, are most liable to contract habits of dirtiness, betaking themselves immediately from their beds to their labour; unseen and unnoticed, they are apt to dispense with all regard to their persons, and they pass six days out of the seven with uncombed hair, unwashed skin, and unchanged linen: nor do they bestow more pains on their habitations than themselves; and the dog, the cat, the hog, the hens, and the children, indiscriminately wallow in the filth to which each contributes.

The peasant and the lesser farmer are in some instances equally regardless of this great preservative of health; though the constant access of fresh air, the odours of blossoms and herbage, and the sweet breath of several sorts of cattle, render the effects of want of cleanliness in this order of people less observable.

Nor are the great or the wealthy totally exempt from offending against personal purity, though their houses are free from dirt, and their linen and cloaths continually shifted; yet such as are not accustomed to bathe, leave their feet and the greater part of their skins unwashed for a length of time together, and fully possessing the means of perfect cleanliness, neglect it in this very important article.

It is the duty of commanders, both in the army and navy, to enjoin proper regulations on this head, and to look that they are strictly obeyed. In the camp, change of straw, airing and even washing blankets, and distant receptacles for excrement, are objects of great importance. In quarters, care should be taken that soldiers are not crowded either in rooms or beds, and that both are kept clean and free from offensive smells: and in hospitals, cleanliness is as essential to the removal of diseases as medicine itself; nay, we may be assured, the one will prove wholly inefficacious, if the other is disregarded.

Compelling seamen to wash their bodies frequently,

frequently, and their linen constantly, and to air their bedding on the decks in moderate weather; scouring every part of the ship between decks, as often as conveniency will permit; fumigating it with the steams of hot vinegar, or the smoke of dried aromatic herbs, and above all, those parts which are appropriated to the sick; will often prevent the approach, and always the spreading of disease: and many of his majesty's ships of war, where similar management prevails, are free from offensive smells, and every appearance of nastiness; and in the narrow space to which the crews are confined, they enjoy the comforts of life, and the blessings of health.

The dirt which is suffered to remain on the skin stops the pores, and obstructs perspiration. Linen saturated with sweat, and hardened with filth, no longer answers the purpose of absorbing the moisture from the surface of the body; and from hence proceed colds, fevers, and a variety of other disorders. Infection will lodge a long time in bedding, dirty cloaths, and even in the hair and upon the skin; and epidemical diseases will frequently be communicated in this way, and break out in the most terrible and unexpected manner.

A few general rules will suffice to remedy all the inconveniences, and obviate the dangers which arise from the neglect of this domestic duty; and as the compliance with them is within the reach of individuals of every degree, we flatter ourselves, a regard to their own welfare and interest, and a general wish to promote the public good, will be found inducements abundantly sufficient to excite mankind to an exact and scrupulous performance of it.

Wash the hands, face, mouth, and behind the ears, every morning as soon as you leave your bed, without regard to any work

or business that you are immediately to engage in, however dirty in itself.

Let the skin of your whole body be washed as often as conveniency will permit; women, and such as have not an opportunity of bathing, will find a basin and cloths, though not equally salutary; yet extremely useful.

Change your linen often, and rather abridge yourself of other enjoyments, than neglect an article so indispensable to the preservation of health.

Let no work of filth be performed in the house, which can possibly be done in the open air; washing foul linen in a close place may be attended with very disagreeable consequences.

Permit animals of all kinds to sleep in some outhouse, remote from the habitation of the family; nor on any account suffer them to be confined long in a room.

Let physicians, surgeons, nurses, and all other attendants on the sick, wash their hands, and expose themselves for some time to the open air, before they pass from one patient to another, or set about any of the common offices of life. We are persuaded, diseases are very often spread in a way which such precautions would prevent; nor are they less necessary for the attendants themselves, than for those with whom they are to have immediate intercourse.

Nor should the sick themselves be denied to participate in the blessings of cleanliness: if those in health enjoy the agreeable sensations which arise from washing and change of linen, how highly must these refreshments contribute to the comfort of the convalescent; and, with due caution, so far will such an indulgence be from injury, that it will in many cases effect more towards a cure, than the best advice which can be procured, or the utmost efforts of medicine.

C H A P. VI.

Of Indolence and Sleep.

IN a foregoing chapter, we have considered exercise as an indispensable ingredient in every prescription for the preservation or recovery of health; and we have described the evils which attend a life of inactivity, and the benefits which are derived from a contrary course: but we are now to treat of *indolence*, or a voluntary disuse of motion; or of those actions of the body, which are necessary to the due performance of the functions of life.

Whether indolence is occasioned by a sluggish disposition of mind, or has arrived at a state of indisposition, it is alike important to us to shake it off: it is at first an indiscretion, advances to high imprudence, and at length acquiring a habit by long continuance, becomes actually a vice, unfitting us for all the purposes of society, and proving not only destructive to health, but subversive of those principles which should inspire us to acts of public virtue and private benevolence.

Men of easy fortunes and undisturbed passions, are apt to indulge themselves in a kind of supine inattention to the business of the world; accustomed to have all their wants anticipated, and all their desires gratified, and strangers to the anxieties of hope, and the perturbations of fear, they are content to glide through life without interesting themselves in the concerns of others, and feel no impressions which are not actually made upon themselves.

But even in this state, indolence is inconsistent with virtue or morality, which demand the exercise of our faculties on every occasion that offers, either to benefit ourselves, or assist our neighbours.

Indolence of mind soon communicates its influence to the body. He who con-

ceives that he has nothing to do in the world, will soon lose all desire of mingling with it; he will sit still, and expect the ordinary occurrences of life; and actuated by no emotions, will have no views of gratification in changing his situation.

At this period commences the reign of indisposition: his mind will soon become sick of a world which exhibits no charms to him; his body will correspond; and loathings, indigestions, and wind, hypochondria and melancholy, will disturb his quiet; and he will be either roused by the pangs of disease, and the terrors of danger, or sink into lethargic stupidity, and quit a being which is indeed scarce worth preserving.

If the picture we have drawn is alarming, it is founded on circumstances which exist in a thousand instances; and it behoves those who feel the creeping advances of indolence, to apply themselves to some active employment, at once to resist the advances of this insinuating invader of their health and happiness, who under the guise of accommodation, and in the garb of tranquillity, saps the foundations of mental and bodily vigour, and leaves the mind a prey to despair, and the body to disease. However much such persons may be at a loss at first to engage themselves in satisfactory pursuits, private wants and the exigencies of public affairs will soon afford them opportunities to enjoy the conscious pleasure of deriving health, happiness, and reputation, from those active scenes which they have been accustomed to forego, for the sake of a criminal indulgence in unwarrantable and unprofitable indolence.

It may seem absurd to attempt the establishment of rules for *sleep*, the necessity for

for the longer or shorter duration of which must in general be governed by circumstances beyond the prescriptions of medical or anatomical art, or the reach of determined regulations.

Yet general ideas of the quantity of sleep necessary for the preservation of health, may be gathered from age, constitution, and habit of body. The human frame, exhausted by the natural functions, and fatigued by the employments of life, requires rest from labour, and the refreshment of sleep: nor is the suspension of sleep less needful for the mind, the faculties of which would be rendered dull, and impaired by continual and uninterrupted exercise. But too much sleep inclines the body to fat, and is apt to occasion disorders of the head; and to affect the mind with heaviness, want of apprehension, and inactivity: and weak nerves, low spirits, inflamed eyes, and an over thin habit, are the consequences of not allowing sufficient indulgence in this particular.

Infants require a great deal of sleep; youth and labouring persons a larger share, than those who are arrived at manhood and lead less active lives; and the advances of age call for longer suspensions from the toils and cares of the world.

Early rising has been so often recommended, and the salubrity of the practice so strongly enforced by writers of all classes and denominations, and on almost all subjects, that it is wholly unnecessary to urge it farther than to observe, that it disposes men to betake them early to rest; and to divide the day and night into those portions which appear consonant to the disposition of that Almighty Power, which directed *man to go forth to his work and to his labour until the evening.*

Whether the hours of sleep are actually more refreshing before midnight than after, or whether the customs of youth acquire such a habit as to become in some measure constitutional, we shall not pretend to de-

termine; but whoever will compare the countenance of him who spends his night in pleasure, business, or study, and dedicates morning and day to sleep, with that of the man of regularity, who retires in good season, and meets the sun at it's rising, will in the pale, wan, and haggard visage of the one, and the florid, brisk, and healthful cast of the other, find reasons more convincing than arguments can offer, for a course of life apparently productive of comforts, which no man in his senses would give up to the anxieties of the gaming-table, the unsubstantial enjoyments of bottle mirth, or the uncertain fruits of intense and laborious study.

Many are the requisites to procure sound and sweet sleep; health of body, temperance in eating and drinking, moderate exercise, and above all, a mind at ease, will conduce wonderfully to the refreshment of sleep.

Temperance is at our own command; and he who chuses to lie down with a load of wine, or a full and hearty supper in his stomach, must thank himself if his night is disturbed with frightful dreams, nightmares, and hobgoblins, and his morning ushered in with head-ach, sickness, and loathings.

The degree of exercise does not always depend upon ourselves; that which arises from labour, is seldom attended with inconvenience to rest, because it is accustomed; but the necessity of hard travelling, or violent exertions, either in ordinary employments, or in sports and amusements, is apt to render sleep broken, interrupted, and unrefreshing.

But who shall say to the afflicted mind, lie down in peace, or smooth the troubled ocean of anxiety into tranquillity? Almost every physician who writes, and every friend who advises, bids us go to our repose with minds serene and unruffled. Alas! where are the balsams that can medicine the son of adversity to sweet sleep, or where are the arguments

guments that can turn the stream of sorrow? Sleep, like other friends, forsakes the mansions of wretchedness, and spreads it's benign influence over health, ease, and prosperity!

The best directions which can be given, are to proportion the time allotted to sleep to the calls of nature; to go to rest early,

and rise betimes; and never to suffer in temperance or indolence to prolong it, or the cares of the world to retrench it unreasonably. He who sleeps much will be a drone; and he who robs himself of this necessary refreshment, will be like the bee, who with unremitting industry gathers the honey which he is not permitted to enjoy.

CHAP. VII.

Of the ordinary Evacuations of the Human Body, and certain natural and acquired Causes of Disease.

THE ordinary evacuations are, *excrement, urine, and perspiration*; and any one of these being obstructed, the body can no longer continue in health.

Regular stools are essentially necessary: when the dregs of our food lie too long in the intestines, they not only produce disorders of the bowels, but corrupt all the humours; and when they pass off too quickly, the nourishment of the body suffers. Moderation in this, as well as in every thing else, is to be desired, and may be attained by regularity of living, both with respect to eating, drinking, and sleeping.

It is by no means easy to determine how many stools are necessary to health, as this must depend on the size of body, the quantity of nutrition swallowed, the habit, and more than all the rest, on custom. Some are of opinion, that one stool in twenty-four hours is sufficient: to others it seems necessary that this evacuation should be repeated twice in that time; and perhaps a stool every morning and evening, may be absolutely requisite for a hearty person in high health.

To procure regular stools many methods are recommended: some advise that nature is to be solicited by attempts to go to stool

at certain hours, with or without occasion; and that by this means, a habit may be acquired, which will in time become natural.

Others urge the necessity of rising early, and immediately using exercise in the open air, and insist that the posture of lying in bed is unfavourable to this evacuation; the propensity to which, they observe, is abated by the increased perspiration, which is excited by the warmth.

And there are others who maintain, that any disposition to costiveness should be removed by medicine before it becomes habitual, and that although there are instances of persons in good health, who have not the benefit of this evacuation for many days together, yet that this is an unnatural state of the body, and will sooner or later occasion disease.

To each of these opinions some regard may be due. Offering to evacuate at constant and fixed times, may by degrees produce the effect desired: early rising and exercise is in this, and every other case, highly commendable; and medicine should not be neglected, if nature obstinately refuses to perform her office.

But we are ourselves inclined to believe, that a proper attention to the rules and regulations

gulations which we have endeavoured to establish, respecting the ordinary functions of life, with regard to food, liquors, air, and exercise, will leave very few difficulties to combat with in the management of this evacuation; and that he who eats moderate meals of wholesome diet, drinks temperately, and leads a life of activity, will need no restrictions to hours, or postures, nor require the assistance of physicians or medicines.

But where costiveness is actually become a disease, it will be necessary to avoid every thing of a binding or heating nature; and where a looseness is of long continuance, and threatens worse consequences, such food and drink should be used, as is of an astringent and strengthening quality; directions for which, as well as for medicine in both cases, will be found in other parts of this work.

If we are to place confidence in the pretences of certain quackish and empiric practitioners of physic, ancient as well as modern, we should speak of the evacuation of urine, and in particular of its appearance, with great caution and diffidence; for if the various disorders which affect the human body are to be discovered and distinguished by inspecting the urine, we may lay aside symptoms and indications, as totally foreign to medical knowledge, and learn to form a judgment of the patient's situation, not from feeling his pulse, examining his body, and enquiring into the nature of his complaints, but from inspecting, tasting, and analysing his water, which these wonderful adventurers would impose on mankind as containing infallible information, not only of the nature of the disease, but of the progress it has made, and the probability of cure.

But as the urine may be affected by so many different causes, such as exercise, other evacuations, the passions of the mind, and above all, by the nature of the food and liquids, which may all, or any of them,

occasion very great changes both in the quantity, appearance, and composition of this discharge; so we are of opinion, that it is utterly impossible to form an accurate judgment from an examination in which we are liable to be deceived by circumstances which remain uncommunicated, either of necessity or from neglect.

The only dependence therefore, which ought to be placed on the appearance of urine, is to mark the progress and changes of diseases, by comparing it with the symptoms discoverable on personal attendance and inspection.

Ingenuous physicians have attempted to ascertain the certain quantity of urine which ought to be discharged for the purposes of health, in proportion to the liquids taken in; but as these calculations make no allowance for the variation of perspiration, which is well known to influence the quantity of urine, we apprehend such enquiries must fall short of producing any thing like precision; more especially, as the nature of the food will also act considerably in the diminution or increase of this evacuation.

For these reasons, we cannot advise any great dependence on such rules; nor indeed do we conceive that they are of much importance. The exercise of common sense, will lead us to discover if the discharge of water is so small as to produce, or threaten inconvenience; and an immoderate increase of this evacuation will be still more perceptible, and more alarming.

The separation or secretion of the urine, and the discharge of it, are lessened by a life of inactivity; exercise promotes both, and contributes to health in this way, as a regular and copious passage of urine not only prevents diseases, but in some cases cures them: soft beds, too many bed-cloaths, and whatever excites too great a degree of perspiration, decreases the quantity of urine; and heating, spicy food, and drying and astringent liquors, have the same effect; and such as have reason to suspect

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that this evacuation is insufficiently performed, should refrain from Port wine, claret, and whatever has a tendency to add to this complaint.

The formation of stones, and gravel in the bladder, may be chiefly attributed to the retention of urine, which stagnating, becomes thick; and the thinner parts being again withdrawn into the mass of fluids, those which are gross and earthy remain behind, and harden into those substances, which occasion the most miserable complaints; and thus habits of indolence, or employments which do not admit of activity of body, are productive of diseases, from which those whose inclinations and engagements lead them to the use of exercise in general escape.

The custom of retaining urine for a length of time, in our attendance on divine worship, and at all places of public amusement, is attended with very dangerous consequences; and those who feel an inclination to discharge it, should not be restrained by motives of delicacy and decorum, which ought never to establish rules prejudicial to health, and hazardous to life itself: the bladder will sometimes lose the power of action by over distension, and it is often by that means rendered paralytic, and unable either to retain or expel urine.

If the quantity of urine is too great, the body may be weakened even to a consumption; and this will happen from drinking largely of small and weak liquors, or from whatever tends to dissolve the blood: for this disease, which is known by the name of *diabetes*, a proper regimen and medicines will be found under that head.

Perspiration is of two denominations: insensible perspiration, which is that fluid that is continually passing through the pores of the skin, serving to carry off all noxious humours, and such as are useless to the human body; and sensible perspiration, being the sweat which is excited by labour, exercise, or medicine.

Different opinions prevail with respect to

the quantity of insensible perspiration; some describe it as the greatest of all discharges, an idea widely differing from the doctrines of those who conceive that three-fourths of the liquids swallowed pass off in urine; but however that may be, it is of such importance to the health of the human body, that whilst it continues to be performed with regularity, we are in general free from diseases, and the moment it meets with obstruction, the whole frame suffers, and disorder follows: not are we so apt to attend to this evacuation as to the others, which are more perceptible; so that fevers, rheumatisms, and a variety of other diseases often attack us, without our suspecting that they proceed entirely from obstructed perspiration.

It has been the opinion of many eminent physicians, that almost all the whole list of fevers and feverish complaints originate in colds; and if we except some few which are contagious, and others which may be epidemic, the apprehension appears to be well founded; which will more clearly appear, if we consider that the first sensible operation of a cold is in a check or obstruction of perspiration, and if we reflect on the various ordinary circumstances of life, which may be and frequently are productive of this evil.

The variety of changes which happen in this island, both in air and weather, are so great and so sudden, that no precautions can possibly be taken to prevent the effect which it is obvious they must have on the state of perspiration: extreme heat and piercing cold succeed each other so quickly, that a man must carry his wardrobe about with him to be provided for the vicissitude; and the twenty-four hours of the natural day, frequently exhibit such scenes of alternate summer and winter, sunshine and rain, as to baffle every attempt to accommodate our dress, or provide suitable shelter to protect us in the various exigencies of the fluctuating seasons.

In such a climate, the best caution is to
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harden ourselves against the effects of these changes by exposure; to venture abroad in all weather, however severe; and whilst we remain in the house to admit a current of free air: husbandmen and other labourers in the open fields or grounds, frequently arrive at old age, without being subject to those pains, coughs, oppressions of the breast, inflammations on the lungs, and other complaints of the like kind; to which those who, from delicacy of habit, or necessary engagements, keep much within doors, are continually liable, on every exposure to air and weather so changeable and uncertain.

But persons of all constitutions, and in all situations, should, as much as possible, avoid the air of the night, and more particularly in the summer, when the perspiration has been copious in the day; the evening and the night dews which fall plentifully in this climate are extremely dangerous, and bringing on obstructions, occasion fevers and other disorders, at a season of the year when they are most commonly obstinate and difficult to remove; and the effects of inattention in this particular, are severely felt in low and marshy countries, where great fogs prevail, and where the inhabitants are constantly afflicted with agues, asthmas, quinsies, and intermitting fevers.

Keeping wet cloaths about the body will certainly stop the perspiration, though if they are removed before the warmth occasioned by the exercise of working or travelling in the rain is gone off, ill consequences seldom follow; and after a thorough wetting, we would recommend to begin the change with the feet and legs, which being generally first wet, should therefore be dried before the other parts of the body: for which practice there is also a still better reason, as wet feet are apt to occasion very sudden and dangerous disorders in the stomach and bowels; such as cholic, fluxes, and twisting of the guts, as

well as inflammations of the lungs and intestines.

When wet cloaths are taken off, the body should be rubbed dry, which will effectually restore perspiration, if an obstruction should have already begun to take place; and by this means, rheumatisms, sciaticas, and other tedious complaints, will most probably be prevented: but, above all things, never let the body cool with wet garments about it; if convenience does not offer an immediate change, keep in motion till necessaries can be procured, and avoid approaching the fire till you are perfectly dry.

The quality of water has also considerable influence in subjecting the human frame to obstructions of perspiration, and the contrary. Persons who plunge or fall into rivers with their cloaths about them, are less liable to take cold than those who are wetted by rain; and sea-water seldom occasions indisposition, even to those who are wholly unaccustomed to it: instances continually occur, of women, and others of the most tender and delicate habits, having their cloaths wetted by the sea, either in parties of pleasure, or on passages to and from the continent, without the least consequent inconvenience.

But of all the causes of obstructed perspiration, none is more common, nor any so much to be dreaded, as damp beds and damp sheets: when the body is fatigued and exhausted with the exercise of travelling, little attention is paid to the bed, so it be got ready to lie down; but the comforts and refreshments of fire, food, and warm liquors, are eagerly sought after; the consequence is, that the perspiration by these means is promoted and increased, receives a sudden and fatal check from a damp bed or linen, rendered still more pernicious by the use of a warming-pan, and the most alarming consequences ensue.

Nor is it in inns alone that damp beds are to be expected; in almost every house, and particularly

particularly in the country, certain apartments are appropriated to the reception of visitors, and the beds in these rooms perhaps are not slept in once in three months. Every one knows that feathers have a propensity to acquire and retain moisture, and therefore this custom should be abolished; the servants of the family should occupy every bed in turn, and such as cannot be constantly used, should be exposed to sun and air in the summer, and dried before the fire in the winter.

The infernal practices of putting travellers into sheets which have been already used, and are either damp with sweat, or moistened with water, in order to be made smooth and to appear like clean ones, are hardly less criminal than attempts to stab, and in general not less dangerous: the laws inflict penalties on those who sell unwholesome meat or poisonous liquors; but the slow, though not less certain murder, by damp or infected linen, may be committed with impunity! It is an admirable caution, for travellers to carry linen with them on long journeys, which they are then certain will be equally free from damp and infection: there is scarce an Englishman to be found, who has travelled much in his own country, but has at some time in his life suffered for want of attention to these articles.

Perspiration is also frequently obstructed by the situation and condition of houses and sleeping rooms: little regard is in general paid, in building a house, to the nature of the soil on which it is to stand; yet it is of great importance to health, that the construction of a house should be suited to the situation. Those which are to be erected in beds of clay, or on spots full of water-springs, should be lifted above the ground by arched cellars; a precaution which is not so necessary where the soil is stony, rocky, or gravelly. And even aspect ought to be consulted; houses which are exposed to north-west winds are seldom dry, and

the inside walls and wainscots against such exposures, will be found covered with drops of water in damp and rainy seasons.

Of a tendency still more dangerous, is the inhabiting new houses before the plaster is dry, and all the materials hardened and sweetened. People are in general eager to occupy habitations which have been built by their own directions, or suitable to their convenience: but this sort of impatience ought to be restrained; for they will not only incur the hazard of colds, coughs, inflammations of the lungs, and consumptions, from the dampness, but the effluvia of paint, lime, &c. are of a very pernicious nature.

Certain pieces of housewifery are also extremely prejudicial to health; such as frequently washing the bed furniture, and putting it up from the chest or drawer without airing, on the arrival of guests; and the still more common practice of washing the room on the very day before it is intended to be used. Few persons can sit in a room, the floor of which is wet, without feeling disagreeable effects from it; and how much more sensibly must those experience the inconvenience of this species of cleanliness, who are condemned to pass a night in an apartment, rendered as unhealthy and noxious as a dungeon, by having every pore and crevice filled with water! Sleeping rooms should never be washed but in dry weather, nor at any time in the day preceding their being occupied at night.

By whatever means an unusual degree of warmth is excited, great care should be taken how the body is permitted to cool; if it has been occasioned by sitting in a close room, to rush into the air at once would be to incur certain danger, and in that case additional garments are absolutely necessary. If the heat has been the result of labour or exercise, the exertion should abate by degrees, that the perspiration may lessen gradually: sudden transitions are by all means to be avoided, and a man who has been exposed

exposed to a frosty air should no more be permitted to approach the fire at once, than he who has been sitting close to it should instantly venture abroad. Heat increases perspiration, and accelerates the circulation of the blood: if either is suddenly checked, the consequences will be unfavourable to health. Currents of air should never be admitted through doors or windows of crowded or over-heated rooms; nor should persons who are about to go abroad, especially at night, drink warm liquors: colds, coughs, and inflammatory disorders, will certainly follow the neglect of this necessary restriction.

Leaving open the windows of bed-rooms at night is attended with danger, even in the hottest weather; and throwing off the cloaths, and reading or working at a window, is alike dangerous. When the windows and doors are to be opened, remove out of the immediate stroke of the wind, and rather go into a room that is cooled, than remain in one at the time the air is first admitted.

When the body is in a state of high perspiration, nothing can be more prejudicial than to drink small and cold liquors: though the disagreeable sensation of extreme thirst is difficult to endure, yet to quench it with water or liquids of the like kind, is to get rid of one inconvenience at the expence of a much greater; for not only lasting hoarseness, quinseys, agues, and fevers, are the consequences of such acts of imprudence, but they have been actually known to occasion immediate death. Frequent

washing the mouth with water, or chewing acid fruits, swallowing only a small part of the juices, will answer in some measure the purpose of drinking; but no considerable quantity of fruit or raw herbs should be eaten whilst the body is hot, for even these have a tendency to check perspiration: a spoonful of spirits of any kind may be taken to allay thirst, and perhaps this is the only case in which they can be recommended without being diluted with water.

But of all the acts of folly that can be committed in a state of perspiration, those of bathing in the cold water, or even partial washing, are the most desperate: from the former, nothing less can be expected than diseases of the most fatal nature; and the latter indiscretion hath in many instances been known to occasion fixed colour, blotches in the face and on the limbs, asthmas, suppressions, and the more tedious but less acute disorders, which however slowly they advance, generally terminate fatally.

From the whole it will appear, that as the health and safety of the human frame depends principally on the regularity of this constant though frequently imperceptible evacuation, no caution should be disregarded which may tend to prevent it's being lessened, checked, or obstructed; and that however duly all the other animal functions may be performed, yet if this, the principal of them all, is impeded, health will soon give way, and disease appear in a thousand different shapes.

C H A P. VIII.

Of the Communication of Infection.

THOUGH much, which might have been said on this subject, has been anticipated under the article of *air*; yet we think it necessary to treat of it more particularly, before we enter on that part of our work which speaks of the disorders which are generally understood to be contagious: and as the prevention of disease is of all studies the most pleasing, because the fruits of it are most advantageous to mankind; so we shall at all times feel more satisfaction in pointing out means to avoid the maladies to which human nature is subject, than in giving directions for the cure or alleviation of them. In the former case we are cheered with the reflection, that the highest of all blessings may, through our endeavours, remain uninterrupted; in the latter, our humanity suffers from the consideration, that the patient must endure the pains of indisposition, before he can avail himself of our attempts to offer him relief.

We have already stated the dangers which may arise from the custom of burying the dead in churches, and in cities and towns, so far as it must be conceived to taint the air, and render it unwholesome to those who are compelled to breathe in it: we may now add, that it is of all others the most ready way to spread infection, and to communicate diseases which demand the utmost efforts of human policy to avert.

It is not from the dead body alone, though in the highest state of putridity, and frequently so offensive as scarcely to be endured, that we are to expect infection: the nurses, the friends, nay, even those of the faculty who have attended the sick in the whole progress of the disease, are frequently invited to the funeral; their bodies, their hair, and their cloaths, are imbrued

with polluted air; acquaintance also, who have not visited the house during the illness, are summoned to grace the melancholy solemnity: the apartments are crowded, the rooms probably lighted up, warm wines and other hot liquors are liberally served, perspiration is promoted, and in this state the whole assembly rush at once into the open air, and mingle with a surrounding multitude, drawn together by motives of unaccountable, but common curiosity. Can it be wondered that bodies so prepared should themselves receive infection, or that they should communicate it to others?

From the house the body is conveyed to the church, either inclosed in a hearse, or covered up with velvet; and the moment it is placed for the performance of the funeral rites, the coverings are in some measure removed, and all the pestilential fumes, which can issue from the corpse through the crevices of the coffin are let loose on a crowded congregation; a practice so absurd, that it may be considered as a mode of offering sacrifices to the remains of the deceased.

Visiting sick friends is generally considered as a mark of respect, but it too often proves a dangerous method of shewing our kindness: those who by affinity or office are bound to attend the sick, are themselves liable to infection; still more so are those who come from the open air into a sick chamber, with all their senses acute and unblunted by the taints and smells, which accompany all kinds of indispositions, and more especially such as are of a contagious nature.

Nor is the danger of retreating from the mansion visited by disease less alarming; the uncommon and generally unnecessary warmth

warmth of a sick room excites an increased degree of perspiration, and the stomach is nauseated by disagreeable smells: in this condition we venture abroad at once, the perspiration is checked, and we swallow down large gulps of air; a refreshment by this time absolutely necessary. If under these circumstances we escape the disease ourselves, it is somewhat extraordinary; and we run the additional risque of communicating it to our innocent and unsuspecting neighbours.

Humanity revolts at the idea of separating the sick from the healthy, and providing hospitals or places of reception for the diseased of all denominations, yet we submit without murmur to the restrictions established by law when the plague or pestilence threatens us; and why putrid and some other species of fevers, which are frequently epidemic, and often highly contagious, should less deserve these precautions, remains yet to be determined. Certain it is, that such regulations have been thought necessary in many well-established states and communities, and the Levitical law was peculiarly attentive to prevent defilement; by which, no doubt, was meant the spreading infection, either from communication with the diseased, or the touch of dead bodies.

Bales of cotton, wool, unwrought silk, and other merchandize of the like kind, will easily receive, and for a long time retain infection: by some such means hath this country been more than once visited by the plague; and it remains on record, that it was at one time imported in the first-mentioned commodity. Lazarettos, and the performance of quarantine, are undoubtedly wise precautions; but as the use of the former is confined to those who return from places suspected, and the latter is only required under particular circumstances, we apprehend there is yet room to extend such wholesome provisions to cases which do not fall within the immediate let-

ter of the present laws; and in particular, we are of opinion, that some restraints are necessary to prevent the crews of ships which have been long pent up at sea, or who have among them any appearance of putrid diseases, from mixing immediately and indiscriminately with society.

The custom of sending servants from one family to another to watch by the sick, though founded on commendable principles of friendship, is yet productive of very ill consequences to society; such persons are not only more liable to infection than those who are in constant attendance, but they carry it with them to families who might otherwise run no risque of receiving it. Though religious orders and vows of celibacy are very justly inadmissible in the Protestant system; yet where such institutions prevail, we cannot but admire the humanity of rendering some of those orders useful, by their being dedicated to the service of the sick; nor can we withhold our approbation from the policy of the order of Malta, which has not only provided a palace for such as are wounded in it's defence, where they are served in a style of superior elegance, but are attended by the knights themselves in person: such treatment will naturally inspire those who fight under their banners with an extraordinary degree of spirit and resolution.

With us, the office of nursing the sick is either divided among our acquaintance and their servants, or conferred on persons, from age, infirmity, or ignorance, very unfit for the duty. Perhaps some regular establishment of nurses, to consist of such only as are of approved tenderness and sobriety, under fixed and regular wages, to be paid in particular cases out of some public fund, might contribute to the comfort and satisfaction of the sick, and to the safety of the uninfected.

Nurses and medical attendants on the sick should use every precaution to avoid infection themselves; whenever they approach

proach the bed, their nostrils should either be stopped with tobacco or some aromatic herb; and keeping the patient clean, admitting fresh air into the room as often as possible, and sprinkling it with hot vinegar, or conveying into it the fumes of that acid, will contribute to prevent infection: such persons as are engaged in necessary offices about the sick, should also be extremely cautious of their communications with those who are in health, and in particular ought to wash their hands and faces, change their cloaths, and go into the open air the moment they leave the sick room, and before they mix with the healthy.

General rules to avoid infection are useless, because those who lay them down must be sensible how very seldom they apply: to advise men to inhabit the country on this account, rather than towns or cities, is to direct the depopulation of all capital places, and to subvert all the purposes for which

societies were first drawn together; to give serious cautions against living in narrow or confined streets, is to suppose that every individual is at liberty to chuse his particular place of abode; and to admonish mankind to avoid staying within doors, and keep much in the open air, is to bid the mechanic and the artist relinquish the employments to which they have been bred, and on which depend the existence of themselves and their families. We do not, therefore, mean to recommend impossibilities; but we shall exhort our readers to refrain from approaching infected places, from visiting the sick through motives of curiosity or respect, and from attending the funerals of such as die of contagious diseases: these are precautions which men of all ranks and conditions may use, and we apprehend will be found of great importance in escaping from infection.

CHAP. IX.

Of the Means of discovering the Natures of different Diseases, and of adapting Methods of Cure.

THOUGH we have endeavoured to give an exact description and account of the symptoms which attend each disease, as it occurs in the course of this work; yet there are some observations which respect them all, and which thrown together, may serve as a general light to guide us in all our enquiries and attempts to form proper judgments of the natures and appearances of different disorders.

And here it may be necessary to observe, that the same disease is not always marked by the same symptoms or appearances, but that these differ very considerably in different ages, constitutions, and sexes; and depend also, in many instances, on manner of life, and temper and disposition of mind:

and that from hence it will frequently happen, that those who are constantly and immediately about the persons of the sick, are capable of ascertaining the approaching disease with more accuracy, from their own observations, than medical assistants, who are generally called in after the symptoms have made some progress, and often after their appearance has been changed, and who are many times strangers to the patient's habit of body, and have no other information on that subject than they can derive from enquiry, which is commonly uncertain, and sometimes unintelligible.

Besides, the different states of the bodies of young patients, and those of a more advanced age, will not only occasion different symptoms,

symptoms, but will require different and even opposite treatment; and the female sex, who are delicately framed, and their nerves more easily affected than those of men, are unable to bear the same copious evacuations, or warm and stimulating medicines; and the like distinction will appear between those whose employments are mostly within doors, and afford but little exercise, and those who by labour of a more athletic nature, and by constant exposure to air and weather, acquire habits more hardy, robust, and vigorous.

We have already noticed, that different climates will not only produce different diseases, but will also occasion a very material variation of symptoms; and even in nearly the same climates, situations high or low, exposed or confined, will have a very considerable effect on the appearance of disease. It may therefore be right to enquire in what manner those who have suffered the supposed disorder in the same neighbourhood have been affected in the several stages of it; nor should particular enquiry be omitted as to the occupation of the patient, as we have before pointed out many trades and employments in life which subject men to particular diseases, and good intelligence on this head will be equally useful in discovering the nature of the distemper, and pointing out proper methods of cure: the same disease in different constitutions, and arising from different causes, may require very different management, and more particularly with respect to regimen, which in most cases we are inclined to think of more consequence than medicine; and especially when an early discovery of the disease will enable us to combat it before it has arrived to any great degree of malignancy.

Medicine, though in many cases indispensibly necessary, may for want of our being able to judge of the nature of the disease, be extremely prejudicial; and whenever administered in any considerable

quantity, particular observation should be made whether any peculiar part of the composition seems to disagree with the patient; and it will be prudent to enquire, whether he has ever had the same kind of disease before, what steps were then taken, and whether any certain drug or medicinal preparation has produced ill effects, or the contrary; by these means we may sometimes attain a method of cure, which our own judgments may not suggest.

With respect to regimen, the best directions will arise from knowing and attentively considering the case before us, and reason will then prove the ablest guide. If the symptoms of a fever are inflammatory, gruels, wheys, herb-teas, and infusions, are not only proper food, but in general supply the place of all medicine; and in slow, putrid, or nervous fevers, where cordials are necessary to support the sick, that purpose will be better answered by sago, jellies, and a proper quantity of good and generous wine, than by all the juleps of an apothecary's shop.

Diseases of slower progress demand no less attention in the article of diet; a course of vegetables hath been known to remove an inveterate scurvy, when all the materials of physic have failed of success: wind, hypochondria, and nervous complaints, have been frequently expelled by a more liberal use of solid food and good liquors; and a milk diet hath often restored the patient to health, in the very advanced stages of a consumption.

Air and exercise are of no small importance when the nature of the disease is ascertained: in the small-pox and other fevers, thousands have perished under the old practice of excluding air; and that which now prevails, of admitting it, under proper regulations, into the chambers of the sick; nay, in the former disease, carrying the patient into the open air; has been attended with the two-fold advantage, of contributing in a wonderful manner to the recovery of

the diseased, and lessening the danger of communicating the distemper to others.

Exercise is generally recommended as an endeavour to regain strength after the body has been reduced to weakness by the severity of some disease; but there are many disorders in which it should be used to obtain a cure. Riding on horseback has removed glandular complaints in many instances, and a voyage at sea has been known not only to stop the progress of an apparently confirmed consumption, but actually to restore the patient to perfect health. In complaints which are occasioned by relaxation, swimming may prove extremely beneficial, adding to the effect of the cold-bath the exercise of the limbs, and in particular opening the chest by the continued regular motion of the arms.

Nor is cleanliness to be omitted in our attempts to render the use of medicine less necessary. Dirty cloaths about the sick, not only add to the discomforts of their situation, but very often to the danger; as

that perspiration which nature intended to carry off noxious humours, is frequently taken back again into the body, and actually contributes to support the disease: nay, there are some disorders which may be totally removed by cleanliness, and none in which it is not of important use, both to the patient himself, to those about him, and to the community at large, as the degree of infection is always proportioned as well to the care taken in this respect, as to the malignity of the disorder.

We shall conclude this chapter with a general observation, that a strict regard to regimen will in many cases render medicine wholly unnecessary, and in all contribute to lessen the occasion for it; and that the effects of precaution in those matters which are within the knowledge of every individual, are always more certain than the operation of physic, which depends in many instances on constitution, and in others, on circumstances which the utmost human penetration may be unable to discover.

B O O K III.

Of Diseases incident to grown Persons.

C H A P. I.

Of Consumptions.

THIS disease generally arises from some accidental cold which occasions a cough; and this cough, if neglected, acquiring force from frequency and long continuance, confirms the tendency to inflammation, which must first have attacked the lungs in some particular part.

Consumptions are described of several distinct kinds; such as the *inflammatory*, which is occasioned by ulcers on the lungs, and this is also called the *pulmonary consumption*; *phthical*, which proceeds from obstructions; and *atrophical*, when produced by an excess of any of the natural secretions: but the seat of the consumption is in the lungs, and is said to be in the air-vessels, and not in the blood-vessels; and sometimes one lobe of the lungs only is affected, and in other cases both.

Though this disorder makes it's first appearance in the form of a cold, yet the original causes may be more remote; such as an hereditary disposition, weak lungs, relaxed fibres, an ill figure or conformation of the breast, or of those parts which it contains; a narrow and flat chest, a long neck, or deformity of body: whatever tends to inflame the breast, or vitiate the humours, must likewise be considered among the causes of consumptions, which is the reason that they frequently follow other diseases, such as the king's evil, the

venereal disease, small-pox, measles, asthma, &c. but in those cases the lungs are not so remarkably affected.

Consumptions may also arise from violent passions; such as grief, disappointment, anxiety, or the like; and also from extraordinary exertions either of labour or intense study.

From excessive evacuations of any kind, either of perspiration, stool, or urine: in women, from too frequent and copious natural discharges; and in both sexes, from too great an indulgence in the propensities of nature.

From a sudden stoppage or check either of customary evacuations, or of particular ones; such as bleeding at the nose, or from the piles; sweating of the extremities, issues, or perpetual blisters; and from improper applications to repel pimples or eruptions.

External injuries, such as blows and bruises, particularly such as are received on the breast or stomach, will occasion consumptions.

Workmen and artificers in certain occupations are also peculiarly liable to consumptions, as we have already mentioned in our chapter on that subject.

Debaucheries of every kind, gluttony, and unseasonable hours, are destructive enemies to the lungs; few *bon vivants*, or jolly

jolly fellows, escape from disorders in those organs of life.

Damp beds, rooms, and houses; wet feet, night air, and a sedentary or confined course of life; dispose the body to be liable to colds, which are frequently the forerunners, if not the causes, of consumptions.

This disease has been also held to be infectious; at any rate it will be always advisable to avoid sleeping with the sick, which without being of any advantage, to the patient may probably endanger the healthy.

Another cause is the suckling of children longer than the mother's strength will allow; a case which often occurs in the middling classes of life, and in tender and delicate constitutions, where prompted by maternal tenderness, or a desire to discharge this duty in it's fullest extent, they give the breast to the infant till their own health is impaired: and in such a situation, the slightest cold occasions a cough, which soon brings on a consumption; the disease is too often communicated to the child, and thus the lives of both may be sacrificed to mistaken and over-acted affection.

From fifteen to thirty-five is the time of life most subject to consumptions; the blood is then in it's greatest fervour, and the lungs disposed to be affected by all or any of the causes we have just mentioned.

The symptoms of this disease are a cough, by which the lungs are first lacerated or torn, and then ulcerated; a fever particularly troublesome in the night, when the cough also comes on with increased violence; spitting blood, sickness, and an inclination to vomit after eating; continual heat, pain, and oppression of the breast; loss of appetite, depression of spirits, inactivity, and restlessness: the spittle is of a saltish, disagreeable, and offensive taste; the pulse soft and small, but generally quick; and the voice becomes shrill, yet loses it's sweetness.

As the disease advances, the symptoms

are more violent and decisive; the patient begins to spit matter at first streaked with livid or green, and afterwards white; his breathing becomes extremely difficult, his cheeks flushed, the palms of his hands and soles of his feet violently heated; profuse and wasting sweats alternately succeed each other in the morning and at night, accompanied with a flux and excessive discharge of urine.

In the last stages of consumptions, the fingers become small and remarkably taper, the nails lose their elasticity, and being bent inward, retain that position; the hair begins to fall off, the legs and feet swell, the eyes become dim, and a difficulty of swallowing, and coldness of the extremities, give tokens of approaching death.

Yet under the pressure of so many symptoms of mortality, consumptive patients are frequently chearful in the intervals of fever or pain, and the remissions of the cough, and constantly flatter themselves with the pleasing hope of recovery. When the nerves are affected, and in hypochondriac disorders, there is always a sinking and despondency; but in consumptions the decay first affecting the fleshy and muscular parts, proceeds so gradually as scarce to alarm the mind, and the patient often lingers on to the last stage of the disease before he entertains the least apprehension of danger; and this fatal security frequently leads him to the brink of the precipice, before he discovers that his fall is inevitable, and prevents his seeking advice till it is too late to derive benefit from it.

We have already, in various parts of this work, pointed out the cautions necessary to be observed to prevent this fatal though delusive disease, and to these we need only add our earnest advice to our readers, never to neglect the least tendency to it, which always appears in an obstinate cough; but to betake themselves immediately to proper regimen, which will in many, perhaps we may venture to say in most cases, effect the cure of this disorder, if it is taken
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in season; but if it is suffered to proceed till the constitution is shaken, it scarce ever fails to prove fatal, in spite of every exertion of art, and all the powers of medicine.

The effects of regimen in cases of this sort have been so extraordinary, that by strict attention to it, persons apparently consumptive have passed through lives of considerable length without having all the symptoms removed, and without their being increased to any degree of violence.

In the *pulmonary consumption*, or that wherein the lungs are principally affected, the inflamed vessels being either dissolved into matter, or forming with the juices they contain a schirrous or warty tumor, some portion of the lungs becomes unfit for the use of circulation: if this obstruction is small, it may remain without much increasing, under the regulations of great care, during the patient's life; if it is large, and a considerable part of the lungs injured, the disease is every moment aggravated, whether it be by inflammation tending to the production of matter, or by the formation of those warty pimples or substances, which we have just described, rendering a portion of the lungs impervious; for as the same quantity of blood must necessarily pass through the lungs when a portion of them is obstructed, as when they were in perfect health, it follows that the action and re-action of the solids or vessels, and the fluids which they contain, must be increased in proportion to the extent and situation of the parts affected, and to a degree inconsistent with the safety of this organ.

Hence it will appear, that if by such a regimen as will prevent the circulation of the blood from being hastened or urged on with any extraordinary impulse, the increase of the disorder may be stopped, or the consequences arising from this obstruction be rendered less troublesome, life may be prolonged for a very considerable period, even should no hope remain of entirely

removing the disease, which may always be expected if proper measures are adopted in the early stages of it.

Air and exercise are the first great articles. Change of air is of so much consequence in all diseases of the lungs, that when it has been from a good air to a worse, it has in some instances been found serviceable. Narrow chested and asthmatic persons will sometimes breathe better even in the close parts of the metropolis than they could in the country; but in consumptive cases, the air of all large and populous places has been proved by experience to be injurious: when the patient is advised to a change of air, it becomes an important object to point out the most proper change, and to enforce it without delay.

In almost every part of England, particular spots have acquired reputation for salubrity of air and healthiness of situation; and those will generally be found to be on dry and gravelly soils, open to the gentler gales, but screened by superior eminences from the rude blasts of keen north-east winds; where the water is pure and light, and where well sheltered and pleasant walks and rides may invite the patient to spend great part of his time abroad, without hazard of being caught by sudden rains, or exposed to cold and penetrating weather. And if we take a view of those which are usually recommended for this purpose in the vicinity of London, and point out the accommodation of them to times, seasons, and circumstances attending the sick, the same descriptions, and the same use of them, will apply to other different parts of these kingdoms. The airing places of other climates will be noticed under the heads of *diseases peculiar to different countries*.

This metropolis is surrounded on all sides, except the west, with a ridge of eminences approaching within a few miles of it; on the north, Highgate and Hampstead; on the

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north-east, Epping Forest and Enfield Chase; and on the south-east, Blackheath, Clapham, and Putney Heaths: towards the west the plain extends with few elevations to Egham and Bagshot Heath. The summits of the several hills we have mentioned, being comparatively high grounds, are exposed to the sharp winds which blow from the north and north-east, and therefore early in the spring, whilst these winds are accustomed to blow violently and almost constantly, such situations are certainly unfriendly to complaints which indicate an approaching consumption.

But to the southward, the south-east, and the west of London, as Chelsea, Fulham, Battersea, Camberwell, Peckham, Brompton, Kensington, and some parts of Lambeth, are dry and sheltered vales, undoubtedly very proper in the earlier seasons of the year.

As the summer advances, the higher situations may become more advisable, and at this season of the year, the marshy lands on the banks of the Thames, or the garden-grounds of Battersea and Fulham, which then abound with the most putrid exhalations, both from very offensive manure and corrupted or rotten vegetables, would be as improper as the bleak hills of Hampstead and Highgate, or the still sharper air of Blackheath in the winter. Islington, the usual airing place of the city, is too much exposed to north-east blasts in the spring, and to the smoke of the city, driven upon it by the southerly winds which generally prevail in the summer.

Nor must we be altogether indifferent in our choice of situations, whether we recommend our consumptive patients to journey east or west, north or south, from the metropolis; the atmosphere of smoke and exhalations, which generally hangs over it, and forms a cloud which extends miles beyond even the limits of the extremest suburb, is driven in the direction of the winds which prevail in the several

seasons. In the summer it is pushed by the southerly and south-west winds to the northern or north-east quarters, where that penetrating foot, which is commonly called *the blacks*, falls in such showers, as to soil the whole face of the country. In the winter and spring, whilst northern and north-east winds prevail, this heavy atmosphere moves to the opposite points, and has been remarked to soften the rigours of the winter winds, which pass through it to such a degree, as to bring the vegetation in the south and south-west quarters at least a fortnight more forward than it is found in similar situations to the north and east.

It is not enough, therefore, to recommend air; it must be taken where it is most salutary, and received at proper times and seasons: when the fresh air of the day may be refreshing and highly beneficial, that of the night would be noxious and injurious; and every precaution is worth attending to where life itself is concerned.

Bristol is generally recommended in consumptive cases, for the sake of the double advantage of excellent air and water, which has always contributed at least to the ease of the patient, if it has failed of effecting his recovery. When great benefit has been received at Bristol, we are apt to attribute the cure in some measure to the journey also, which we believe to be in many cases highly contributory to the cure of this disease; and, perhaps, if it was customary to recommend residing at different parts of the kingdom at different seasons of the year, spending the winter near the western shores of the kingdom, and returning as the summer advances to the eastern and northern parts, avoiding by these means the extreme severities of the cold and hot seasons, nearly the same advantages might be derived from such a prescription, as from a voyage to the continent; I mean, such a voyage as is only undertaken with a view of finding a milder climate, and avoiding the piercing cold so injurious to tender breasts. Whoever has

has observed the myrtles and other plants of tender growth in Devonshire and Cornwall, flourishing amidst the severest rigours of winter, which are felt in those counties, will be easily induced to believe that the situation would be equally favourable to the human body labouring under complaints which call for indulgent seasons and a warmer sky.

Nor are those countries without the advantages of medicinal waters, although their remoteness from the capital hath hitherto prevented their being brought into use and reputation: should the idea we have suggested, be at any time thought worthy of improvement, there can be no doubt but air and situations might be found which, though not altogether so salubrious and warm as those of Montpellier and Nice, may yet afford considerable benefits to those whose circumstances do not permit them to seek the advantages of distant climates, or who for want of resolution to combat the supposed dangers of the seas, and the difficulties of foreign travelling, submit to the advances of the disease, without an attempt which might probably produce actual recovery.

But when change of air, or change of climate are recommended with any hope of actually removing the disorder, the advice must be put in practice without delay; it is in the early stages of it only that success may be expected to attend these measures: when the lungs are obstructed to a violent degree, or the matter has been copiously received into the blood, journeys or voyages answer little other purpose than to harass the already exhausted patient, and drag him to breathe his last remote from his friends, and deprived of the comforts and conveniences of his own habitation.

Nor do we apprehend the change of climate to any one particular spot, so likely to be productive of benefit, as adopting the same plan which we have already offered for our excursions nearer home: at certain

seasons Portugal is too hot, Nice damp and foggy, and the air of Montpellier sharp and penetrating. The atmosphere in the neighbourhood of Naples is with some winds too heavily loaded with sulphur, and others blow such pestilential blasts, as to threaten destruction to the most perfect health, and the soundest constitution.

If we were to recommend a tour of health for a consumptive habit, where the disease had only threatened, or the effects of it had not yet taken place in any great degree, we would advise the patient to spend the summer on the western coasts of England, or the opposite shores of France; the winter in the southern provinces of that kingdom, the spring in Italy or the kingdom of Naples, and the succeeding summer in some of the cool vales of Piedmont or Savoy: and we are of opinion, that such a journey undertaken in season, and pursued with care and attention, would very probably effect much more than a continued residence in any one spot, however celebrated; in this disorder the appetite acquires from the disposition of body a perpetual desire of variety, and the gratification of it may be as essential in air and weather, as in food or liquors.

But we are inclined to believe, that a sea-voyage of considerable length, would be still more likely to promote the cure of this lingering malady; sea-sickness often proves highly beneficial to the consumptive as well as the air of the sea: these cases are not only frequently attended with an impaired digestion, but also with a redundancy of bile; and perhaps the emetic operation of sea-sickness may cleanse the first passages, and be of very singular use.

Experience, indeed, hath in many instances convinced us of the salutary effects of voyages by sea; we know one of a young lady, who after being very far advanced in a confirmed consumption, and receiving considerable relief from an accidental long passage to the continent, continued to voyage,

age, not only from port to port in Europe, but even across the Atlantic, for several years, enjoying, during her continuance at sea, the most perfect health, but relapsing again as often as she remained long on shore; a necessity for which, at length happening, from contrary winds or foul weather, the progress of the disease became so rapid as to carry her off before she could again betake herself to that element, which seemed so congenial to her constitution.

Those who have resolution enough to attempt this method of cure, should provide themselves with such a stock of living fresh provisions, and such vegetables and fruits, as will bear keeping, that they may incur no hazard of being reduced to salt meats during the course of the whole voyage; nor will the keeping a cow on board a ship, for the benefit of the milk, be attended with much difficulty; at any rate, goats may be carried; and if a quantity of proper dried herbage be provided for them, the milk will be at least equal in medicinal goodness to that of cows.

The benefit of exercise in this distemper has been strongly urged by every physician who has prescribed for it, and every writer who has treated of it; yet such cautions are frequently omitted, as may be absolutely necessary to prevent this great auxiliary from being abused, or being used in such a way, by consumptive patients, as to prove more injurious than beneficial.

The best exercise that can be taken, is riding on horseback; and moderate journeys in temperate weather are of excellent use in consumptive cases: but the season and hours for riding should be consulted; in sharp, damp, cold, or foggy weather, late at night, or too early in the morning, consumptive persons will find even this exercise prejudicial, and the disease will be increased by any indiscretion in this particular.

If the patient cannot bear this kind of exercise, he must seek it in some vehicle;

but it should be as open as possible; care being taken in this way of moving, as well as on horseback, to avoid the risques of being wet, or violently affected by any of the sudden changes in the air and weather, to which this climate is so liable.

In using exercise either way, it should be so disposed as to create variety; the same ride repeated will soon tire, and when it ceases to be pleasing, it will be no longer useful: journies, therefore, are to be preferred before rides, but both should be completed before dinner; riding on a full stomach will rather do harm than good.

But above all things, exercise should be enforced in the early stages of this disease: as it gains ground, and the body becomes weak, a total disinclination to motion takes place; and the pain and fatigue with which it is accompanied, serve rather to harass the patient than to benefit him. Of all chronic or lingering disorders, none requires such early attention as a consumption: in the first stages it may frequently be effectually cured, and always relieved and alleviated by regimen alone; as it advances, the difficulties are increased; and when it has been suffered to prevail in a very considerable degree over the constitution, it not only refuses to yield to our co-operations with nature, but frequently (indeed, generally) sets at defiance the efforts of medicine; which, however advantageous at certain periods of this disease, will be found wholly inefficacious when the symptoms are aggravated to such a degree as to leave no hope from air, exercise, and a proper regulation of diet: Medicine and regimen must go hand in hand in the cure of consumptive cases; and when the latter becomes useless, little expectation of success can be formed from the former.

But air and exercise alone will not be sufficient to effect a cure; a regulation of diet demands our attention, and indeed is indispensable in consumptive complaints. Persons labouring under this disorder should use

use no food of a heating nature, or which is hard of digestion; the animal food should be taken in small quantities, and of those kinds the flesh of which is white and light: the drink should be also cooling, and vegetables and milk should constitute the greater part of the patient's sustenance; but even in the use of these, the constitution and habit of body ought to be consulted; for whatever produces sickness or griping, must be omitted without hesitation.

Milk diet alone has been recommended as almost infallible in the cure of this disease; and, perhaps, it has in many instances succeeded even beyond expectation.

Of all milk (except the milk of a woman's breast drawn by the patient himself) asses milk is esteemed most salutary; if this can be obtained in sufficient quantities, (for a small quantity can be but of very little use) it may constitute a principal proportion of the patient's food, at least of the liquid part of it; drinking half a pint in twenty-four hours can produce but a very trifling change in the humours, nor indeed will either ordinary patience, or a common constitution, hold out to wait a cure which is to be produced so slowly: and it is owing to it's not having a fair trial, that this medicine in many cases loses it's reputation, and is laid aside as inefficacious; an idea which is also frequently heightened, by it's not being administered till the disease is in much too advanced a state to receive benefit from any application.

But in obstinate coughs, and consequent pains in the breast, which threaten, and if not checked in time, would certainly occasion confirmed consumptions, asses milk will produce very extraordinary effects, and in most cases prevent the formation of matter on the lungs; but if the ulcers are already formed, it can hardly be expected to succeed.

Asses milk ought to be drank immediately as it is milked from the beast, in quantity (for a grown person) not less than half

a pint at a time, and repeated four, or at least three times in the twenty-four hours, at proper distances: some recommend eating a bit of bread or biscuit with it as often as it is taken, but this must depend principally on the patient's appetite. Instead of giving it whilst he remains in bed, we apprehend the better time is just before he is about to use his exercise; if it should occasion purging, that quality may be corrected by adding a small quantity of conserve of roses or powder of crabs claws.

Next to asses milk, that of goats seems most suitable; cow's milk, though not so easily digested as the others, may yet be used to very considerable advantage, if mixed with an equal quantity of barley-water; and feeding the animal, whose milk is to compose the sick person's diet, on particular sorts of herbage, has been suggested as a method of adding the virtues of those herbs to that of the milk; or perhaps this purpose may be answered with much less difficulty and greater certainty, by mixing infusions of these herbs with the milk, instead of barley-water.

But a milk diet will not suit every constitution; there are some with which this nutriment, excellent as it is in consumptive cases, seems to disagree; if this is occasioned by a proneness to generate bile, or too strong a tendency to acidities from weak organs of digestion, in the latter case lime-water may be added to the milk, and in the former it is probable, that whey from the milk of cows or goats would agree best. We ourselves knew a gentleman who had recovered from a confirmed consumption to perfect health, by the use of goats milk whey, which he drank in large quantities for several months; retiring for that purpose to the Highlands of Scotland, where he was out of all danger of being tempted to deviate from a regimen of which he had entertained the highest opinion, and which indeed was fully justified by the event.

But the common addition of rum or other spirits to milk, is by no means to be recommended; ardent spirits heat a frame already disposed to fever, and coagulate the milk, answering the purposes of destroying the best qualities of the medicine, and increasing the most troublesome part of the disorder.

And when we advise a milk diet, we do not mean to enjoin an immediate departure from every other kind of food or liquors to which the patient has been accustomed, or to confine him at all to this liquid only; a change so sudden and violent might be attended with danger: it may be right to eat of light animal food once a day; by degrees to drop the flesh, for the broth of chickens, veal, or lamb; and gradually to omit the use of even animal juices. And the same methods may be taken to break off the use of wine, diluting it with water in augmented proportions, till it can be altogether disused without inconvenience.

But the sooner the patient can be brought to bear a diet chiefly of milk and vegetables, the better will be his prospects of speedy and perfect recovery: this diet should be composed of every variety which is consistent with the idea; such as rice-milk, barley boiled in milk, puddings made with milk, ripe fruits of all kinds in tarts or puddings, jellies of all sorts of fruits, and the fruits themselves in conserves, marmalades, and preserved with sugar.

To this diet may be added most sorts of shell-fish: oysters in particular have been found highly beneficial, more especially if the patient is much reduced in strength or spirits; in which case it may be also necessary to allow rich broths, jellies, and the like; but care should be taken not to oppress the lungs by an overcharge of chyle, from giving the patient considerable quantities of any kind of nutrition at once, which may accelerate the circulation of the blood, and of consequence add to the cause of the disease. Consumptive persons

should feed like infants, often, but little at a time.

The caution which is so often, and generally so unavailingly repeated in other disorders, may with great propriety be applied in consumptive cases; *let the mind be kept as easy, undisturbed, and chearful, as possible.* Consumptions frequently originate in grief, disappointment, or a melancholy turn of mind; therefore, mirth, variety, and whatever tends to inspire chearful thoughts, must be beneficial; but this advice, as we have before observed, is more properly addressed to the friends of the patient than himself, and humanity and affection will induce them to use every endeavour to prevent his adding to the calamities of sickness, by brooding over the misfortunes which may have occasioned it.

The use of the Bristol waters is always recommended in consumptive cases, but the prescription in general comes too late; if the patient is sent thither before the disease is confirmed, and in the very first approaches of it, great benefit may be derived both from the journey and from the waters; which taken fresh at the pump, do certainly contain principles conducive to the recovery of persons affected with consumptive complaints, and especially those of the pulmonary kind, or which are occasioned by ulcerated lungs. But the misfortune in general is, that either the physician flatters himself that he can effect the cure without this assistance, or the patient will not be convinced of the necessity of the journey, till it is more likely to prove detrimental than salutary: and thus, from false hopes of the one, or the want of determination in the other, the precious moment slips by, and the unfortunate patient falls a sacrifice to the delay; or alarmed by the advances of the disease, and the opening apprehensions of danger, he yields to the intreaties of his friends, and wastes the little remains of his strength in fruitless fatigue, bringing with him a disorder absolutely incurable,

curable, and adding to the doubts of those, who not knowing or considering the situation in which he arrives at the Wells, attribute that failure of cure to want of efficacy in the waters, which ought to be imputed to the neglect of using them seasonably.

For many instances have occurred of persons recovering from pulmonary complaints after drinking the Bristol water, whose cures have appeared to be doubtful from any other process: and though it must be allowed that the journey, change of air and situation, and variety of objects, circumstances all of them conducive to health in all lingering disorders, and in none more than that of which we now treat, as well as the necessity of being abroad in a fresh and wholesome air early in the morning, may contribute considerably to the cure; yet we cannot help conceiving, that draughts of light warm water may be of use in washing away impurities from the stomach, allaying the heats of the fever by dilution, and supplying the waste of juices occasioned by the copious perspiration which always accompanies this disorder. To these effects we may add those of hope, which will naturally be used as an argument to solicit the attempt, and will always be promoted by the friends and attendants of the sick, as an article of great moment towards the cure of a disease, which generally becomes hopeless the moment the patient himself becomes apprehensive of danger. If flattery of any kind can be commendable, it is that which tends to lessen the fears of the convalescent, and inspire him with expectations of a favourable and happy event.

Bleedings in very small quantities, and frequently repeated, are by some considered as highly advantageous in consumptive cases; and under some circumstances they are undoubtedly so, and in particular where the constitution apparently abounds with blood; when the blood that is drawn ap-

pears extremely fizy, and where there is much pain in the breast, if by this operation these symptoms are abated, it should be continued; but in delicate constitutions, though the pulse may be quick, and in some degree full, and though the blood last drawn may be considerably fizy, yet bleedings will probably be attended with no advantage.

Nor is the appearance of the blood alone, though it should be inflamed and fizy, a reason sufficient for frequent bleedings; other circumstances should be considered, such as the age, strength, habit of body, and usual evacuations, as also the present state of the disease. In the repeated performance of this operation, great caution is certainly necessary: with proper care, it may be useful; but carried to excess, even in small quantities, it may be productive of a variety of ill consequences.

Where this disease occasions spitting of blood, bleeding hath been also recommended; but we apprehend even in this case the same precautions are requisite, and when this circumstance occurs, the following decoction may be used for the patient's common drink.

Take of the roots of marsh-mallows moderately dried, six ounces; or of the leaves, stalks, flowers, and roots of the common mallow, two handfuls—raisins of the sun, two ounces—water, three quarts. Boil the ingredients till one third of the water is consumed.

The Peruvian bark hath been considered as a very important medicine in these cases; and perhaps where the cause of the disease can be easily ascertained, it may be used with success: in consumptions occasioned by suckling children longer than is consistent with the mother's strength, the bark given early, and in moderate quantities, may be of excellent use; under such circumstances it will be always prudent to try this medicine, because it certainly has retrieved many very deplorable situations of health.

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The bark may also be given, when the disorder is supposed to arise from weakening discharges, either from abscesses or other extraordinary evacuations; and where the lungs are not inflamed, or but in an inconsiderable degree, it will no doubt be of use.

One third of a dram of the powder may be taken in these cases every three or four hours, in jelly, syrup, or the patient's ordinary drink: or it may be made into the form of an electuary, by adding conserve of roses, and orange or lemon syrup, and taken in the same proportion.

If the bark in substance should disagree, an ounce of the powder may be infused twenty-four hours in a pint of water; and after being carefully poured off or strained, taken as often as before directed, in the quantity of a common tea-cupful, or the strength of the infusion may be doubled, and then joined with a saline mixture.

But if, after the bark has been administered, the breath becomes more oppressed and light, the dry cough increases, and the pulse grows more hard and quick, or if slight or twitching pains of short continuance about the breast are complained of more frequently, the disease may be augmented by persevering in the use of the bark; and when it produces such effects in the progress of consumptions, from whatever cause they arise, it will be right to desist from the use of it immediately.

If no additional pain, tightness, or oppression, is perceivable, but on the contrary, there is an apparent abatement of the symptoms, it will be right to proceed: but the administration of this medicine requires attentive observation, that it be neither given in the very inflammatory state of this disease, nor the use of it continued after it produces any of the effects abovementioned. And, upon the whole, as much good or great harm may be occasioned by this bark, so the operations of it cannot be watched with too much attention.

Nor is the elixir of vitriol in certain cases used with less impropriety than the bark; a mistake in quantity having once occasioned a consumptive patient to swallow an amazing dose of this medicine; where death was expected to follow, it produced a cure: and to this circumstance it probably owes the credit in which it has long stood in cases of this sort.

For when the pulse is quick and hard, when the difficulty of breathing is considerable, and the cough frequent and attended with much heat, and little expectoration, this medicine will often increase every symptom, and bring on a spitting of blood, and all it's melancholy consequences.

But in the latter stages of the disease, when there is a tendency to putrefaction, it may be cooled and checked by the use of the elixir of vitriol, when it also restrains the wasting sweats, and may prove even beneficial to the lungs, if they should not be so far injured as to be past repair.

Some objections have been made to the composition of this medicine, in which the mineral acid being combined with spices, may, notwithstanding the anti-putrescent qualities of these aromatics, be too irritating where the putrid tendency proceeds from matter mixed with the blood from broken vessels; and under this idea, the spirit of vitriol in tincture of roses hath been recommended as a proper substitute for the elixir.

Balsams have been usually recommended in the cure of consumptions; with what propriety, will probably appear from the following considerations.

Balsams of every denomination (we would be understood to mean those which are known in the shops by the names of balsams of Tolu, Peru, Capivi, &c. and the prepared balsams, such as Locatelli's, balsam of sulphur, &c.) are of a gum-mous and resinous nature, and of a hot and acrid quality.

An opinion seems to have long and universally prevailed, that the external application of these gummous, resinous substances, promoted the healing of all kinds of wounds and ulcers without exception, and this opinion first arose from a discovery that it was absolutely necessary to defend the parts affected from the air, before any hopes could be entertained of healing them; juices of plants alone were found insufficient to form a plaster, unctuous matter soon melted, but these bodies produced an adhesive and therefore lasting defence. Hence the balsams themselves, by degrees began to have the reputation of possessing healing qualities, and virtues of various kinds were attributed to the different sorts.

Remedies which appeared of efficacy in healing external wounds, were apprehended to possess similar efficacy towards the cure of internal diseases proceeding from or attended with ulcerations, and of all internal wounds; and it has been, no doubt, from these apprehensions, that substances supposed to contain balsamic qualities have been introduced into the prescriptions for consumptions, in all degrees and all conditions of the distemper.

Balsamics and vulnerary substances are allowed to warm and stimulate the solids, and prevent a tendency to putrefaction in the juices.

If in an inflamed state of an ulcer, the patient being young and vigorous, any of these resinous balsams are applied, heat, pain, and an increase of inflammation will ensue, and a considerable discharge will follow; the same applications to a cold, phlegmatic habit, in advanced age, would probably only bring on a proper digestion, the foundation of a cure.

Hence it will appear, that if we suppose these remedies to produce the same effects administered internally, it can hardly be conceived that medicines so pungent and heating can be safe, much less advantageous, in a disease which apparently requires very

different treatment; nor do they seem intitled to the indiscriminate praise which hath so lavishly been bestowed on them.

Demulcent medicines, or such as sheath the acrimony of the humours and render them mild, and all such as are of a cooling nature, are to be recommended. Upon the abatement of the inflammatory symptoms, gentle anodynes may be used; whatever is apt to become rancid, such as expressed oils, are irritating; and so, in a certain degree, is nitre, and other cooling salts: wherever, therefore, they are necessary to be administered, the doses should be small, and more frequently repeated. An emulsion made with sweet almonds is an approved vehicle for any remedies which are required to be given; but care should be taken that they are fresh, and unmixed with any bitter ones.

An unexceptionable emulsion may be also made with fresh white poppy-seed, in the proportion of an ounce of seed to a quart of pure water, or rather of Bristol water, if it can be easily procured.

Beat the seeds fine in a mortar, adding the water by degrees, so that it may mix perfectly, and then strain it off.

Acids in general produce good effects in this disease; the vegetable acids, or those of fruits, are to be preferred; ripe oranges, or even lemons, may be sucked with great advantage in considerable quantities, as they promote expectoration, perhaps better than the following medicines, which are sometimes prescribed for this purpose.

Fresh squills, powdered cardium seeds, and gum ammoniac, of each half an ounce—beat them together in a mortar, and add of simple syrup sufficient to reduce the mass to a consistency fit for pills; these may be made of a reasonable size, and two or three of them taken, once, twice, or thrice a day, as the patient's stomach will bear them.

The following mixture hath been also recommended to promote expectoration, and to act as a gentle anodyne; which, as

we have before observed, may in some stages of this disease be necessary, in particular when the cough is so extremely troublesome as to prevent the patient from taking rest, and by that means increasing his sweats, and adding to his weakness.

Take of lemon juice, two ounces—fine honey, two ounces—syrup of poppies, two ounces. Let them heat together, and boil a few minutes over a gentle fire, taking off the froth and dross which arises.

Of this mixture let a large tea-spoonful be taken as often as the cough is troublesome.

But all heating anodynes and cordials must be carefully avoided; nor should any others be used, or more in quantity, than will serve to mitigate a fruitless continual cough, nor until the inflammation attending it, is abated by a cooling regimen and proper evacuations.

Conserve of roses freely taken, even to the quantity of several ounces in a day, hath been said to produce very favourable effects, and particularly when there is any discharge of blood from the lungs; it may be mixed with the decoction recommended for common drink, or taken by itself if more agreeable to the palate.

Drains are also esteemed of use in the cure of disorders of the breast; issues, setons, and blisters, both temporary and such as are kept open, have been earnestly insisted on, as absolutely necessary; and receiving the vapours or fumes of resin and wax, and also of Sterne's balsamic æther, hath been strongly recommended to relieve the shortness of breath: and as neither the one or the other can be attended with any ill consequences, except in cases where the strength is already too much exhausted to admit of the drains, we would by no means oppose the trying these methods of alleviating the pains, and lessening the dangers of this disease.

To the cautions necessary in producing extraordinary evacuations, another may be added, in a circumstance which frequently happens in consumptive cases, and very of-

ten occasions considerable anxiety and some difficulties.

Young and delicate females, from the age of fifteen and upwards, are frequently subject to consumptions; in the advanced state of this distemper, the periodical discharges, if they have ever appeared, generally cease: this alarms their friends; and, at their pressing instances, medicines have been sometimes administered, under an idea that this stoppage has occasioned the complaints, which have aggravated the symptoms.

But the fact is, that the want of this discharge is in these cases attended with no disadvantage, and the return of it would be injurious, by depriving the patient of a portion of that strength which is already insufficient for the purposes of life; if the suppression is sudden, it may be necessary to take a small quantity of blood; but when the evacuation fails through actual loss of strength, or poorness of blood, the disease will be increased by such attempts to promote this discharge.

Upon the whole, when we consider the vast variety of causes which contribute to this disease, some hereditary, some accidental, and many more acquired by irregularity of life, and imprudence of conduct; when we attend to the structure of the lungs, the delicacy of their fabric, the infinite number of vessels of which they are composed, the vast importance of the uses to which they are destined, and the multitude of accidents to which they are unavoidably exposed; we shall rather be surprized that so many persons escape this distemper, than that it should prove fatal to a considerable number.

Temperance, and a certain degree of caution, in many of the ordinary circumstances of life, are the chief, perhaps it may be said the only preventives that can possibly be applied. But the nature of the disease may so easily be known, and the progress of it generally so happily stopped, in the very first stages, that the remedies then used may be in some measure deemed

preventions: as the distemper advances, the difficulties and dangers are augmented, and after it has arrived at a certain height, scarce a hope remains even of palliation.

Early applications, therefore, are always to be wished; especially as much more may be expected from air, exercise, and regimen in diet, used in time, than from the highest skill of the physician, and the utmost efforts of medicine: in most cases

the symptoms may be prevented from becoming violent, and in others the disease may be removed even after it has arrived to a confirmed state; but if it is suffered to proceed till it has ravaged the constitution, and exhausted the strength of the patient, little more can be done than to lengthen his existence for perhaps a few months, at the expence of all the pleasures and most of the comforts of life.

C H A P. II.

Of Fevers.

THIS class of diseases is said to prove more fatal to mankind, than those of all the other kinds united, and the cure of them is in general attended with great difficulty, because in the most simple, symptoms of very different kinds will appear.

We have already mentioned in the foregoing parts of this work, most of the various causes of fevers, such as *suppressed evacuations, bad air, improper food, intemperance, excess of passions, sudden changes from heat to cold, or the contrary, and blows or other injuries, external or internal*; for the prevention of these causes, we have already offered the best rules and regulations which occur. There are also other causes which will appear as we proceed, and preventive methods will also be suggested.

The body is said to be in a fever when the natural heat becomes fiery, or when it is so increased as to accelerate the circulation of the blood, quicken the pulse beyond it's natural speed, and disorder any of the animal functions. A fever hath been described to be an effort of nature to restore health, by ridding the blood of some noxious matter tending to create disease; but it is with much more accuracy and truth considered as a symptom by which the disease is increased and protracted, and

the extinction of the fever will in most cases remove the disorder by which it was occasioned.

In considering the nature of fevers, we will begin with such as are most simple, and the causes of which are most easily ascertained; and such an investigation will serve to give a general idea of the disease, and lead us on gradually to such particular kinds as are more complex both in appearance and effect.

A man in perfect health, both in his solids and fluids, engages in some violent exercise, such as running, tennis, cricket, or the like; this, if continued for a length of time, will greatly increase the velocity and heat of the blood, and when the blood is considerably above the natural heat, the body is in a feverish state: and this is the most simple *fever*, arising solely from the increased action of the solids on the fluids, and the re-action of the latter on the former, which subsides soon after the cessation of the violent exercise or motion.

Another, equally healthy, exposes himself to a cold moist air, by which his perspiration may be very considerably suppressed; an increased quantity of humours will follow, and the increased efforts of nature to throw them off will produce a
feverish

feverish habit; which, however, soon yields to the kindly relaxing warmth of a bed or diluting liquors, assisting the endeavours of nature towards the restoration of the obstructed evacuation.

A third, of a constitution alike vigorous, drinks too freely of wine or other strong or spirituous liquors, which not only increase the quantity of humours, but also stimulate the blood, and add to it's motion; and so a fever is produced, which abstinence and sweating in bed will as easily remove.

In each of these cases, only a simple fever of short duration is generated; but if, in the first case, the blood was so violently agitated as to force an improper separation of it's different parts, or if the velocity and heat of it is so great as to dissipate too much of the thin part, and leave the remainder gross, thick, and unfit for circulation in the lesser vessels; by the mere simple accelerated motion of the blood, an inflammatory fever would be produced, of much longer duration and more dangerous consequence. If the inflammation seizes the lungs, it occasions that species of fever which is called a *peripneumony*; if the membrane which lines the breast is affected, a *pleurisy*; if the brain or it's membranes, a *phrenzy*; and these disorders will prove more severe, in proportion to the fullness or quantity of blood antecedent to the violent motion which occasioned it.

In the second case, the violence of the fever will be proportioned to the extent of the obstruction of the pores and perspiration, and to the quantity and thickness of the blood.

If, in the third case, too much thick and glutinous blood, quantities of wine or other stimulating liquors be added, both the quantity of blood, and the quickness of circulation may be augmented to such a degree, as to bring on those acute and dangerous fevers which too often follow drunken debauches.

And as any one of the above causes may

singly produce a fever, so the concurrence of more than one, or all of them, will occasion a more violent one: for instance, exposing the body suddenly to a very cold air after vehement exercise, and stopping the sweat and perspiration at once, will bring on a very dangerous inflammatory fever; but if the blood had been heated or increased by large quantities of spirituous liquors drank immediately before, the disease will of course be so much the more violent.

The symptoms of fevers vary for the most part in different patients, and even in the same patient at different times; heat and a disordered pulse, however, are signs which are present in every fever, and without which it cannot subsist; they attend every fever, every degree, and every stage of it.

But when the fever approaches gradually, these symptoms are preceded by languor and a disinclination to move, soreness of the flesh or bones, loss of appetite, loathing, sickness, and disposition to vomit; heaviness of the head, and a disagreeable taste in the mouth; and as these complaints increase, they are accompanied with intense heat, quick and strong pulse, restlessness, thirst, &c.

Sudden attacks of a fever are sometimes denoted by excessive coldness and shiverings, weakness, loss of appetite, oppressions and flutterings at the heart, pains in the limbs, sickness, vomiting, and giddiness.

Various, and almost numberless, are the divisions and descriptions of fevers: by some it is said, that they are all contained in those of *ardent*, *nervous*, and *putrid*; others divide this disease into *continual*, *remitting*, *intermitting*, and *eruptive* fevers; and the former of these is again subdivided into *acute*, *slow*, and *malignant*.

The *continual* fever is described to be that in which the symptoms never leave the patient during the course of the disease, or exhibit

exhibit no extraordinary increase or abatement of violence; this fever is called *acute*, when the peculiar symptoms proceed with rapidity and threaten the patient with immediate danger; when the progress of these symptoms is more gradual, the fever is said to be *slow*; and when the appearance of spots or blotches, of a purple or livid colour, shew a putridity in the humours, the disorder is described as *malignant* or *putrid*.

The fever is of the *remitting* kind, when the symptoms do not always continue in the same degree of violence, but when they increase and decrease at intervals, though they never totally leave the patient in the whole progress of the distemper.

And those are called *intermitting fevers*, where there are regular intervals of comparative health during the time the patient may be said to continue ill, as in the case of agues of different denominations.

Being acquainted with the nature of the disease, the method of cure will be obvious. Inflammatory fevers require bleeding, to abate the too rapid motion, quantity, and heat of the blood; but those fevers are now (from the concurrence of a variety of circumstances in the modern manners of life and occupations) become less common than nervous, slow, or putrid ones, where bleeding is actually prejudicial, and in many cases extremely dangerous, tending to weaken the patient's body, and sink his spirits: it will always be safe not to bleed till satisfactory proofs appear that the disease is of the inflammatory kind, a discovery which may be made by an attentive observer in the very early stages of it.

But the moment it is apparent, that the fever is inflammatory, bleeding is not to be neglected; and the quantity of the blood to be taken away, is to be determined by the strength and pulse of the patient, by the intenseness of the fever, heat, and vehemence of the symptoms, as to pain,

difficulty of breathing, &c. Nor should even the *bulk* of the patient be disregarded; for a large, strong man, can certainly afford to lose more blood than a little man equally strong; however, it is always safe to take away rather too little than too much at a time, as the operation may so speedily and easily be repeated if it appears necessary, which may be the case if the inflammatory symptoms, such as the pain, heat, and oppression of breath, do not abate after the first bleeding.

The efforts of nature demand our first attention; to promote her attempts is to act consistently with reason; nor would this disease be so obstinate or difficult of cure, if we were more ready to consult and follow this excellent guide.

When the symptoms of a fever first appear, keeping moderately warm, drinking plentifully of diluting liquors, bathing the feet in warm water, &c. will in most cases prevent the alarming progress of the disease, and give relief in a very few hours.

The ancients as well as the moderns used the cooling methods of relieving from fevers; they also exposed their patients to cold air, gave them cold water to drink, and frequently in such quantities as to promote vomiting; and if contraries cure contraries, this practice is certainly judicious.

Extreme thirst is always one of the complaints in an inflammatory fever, and the patient earnestly solicits a plentiful supply of cooling liquors; in these he should be liberally indulged, and not only gruels, of which the sick are in general soon tired, but drinks of fruits, such as water in which apples have been boiled or tamarinds, whey made with oranges or lemons, water mixed with the jelly or rob of currants, raspberries, or cherries, and even palatable lemonade, may be given in considerable quantities; and very agreeable and salutary draughts may also be prepared from the roots of marsh-mallows, the roots, leaves,

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and flowers of common mallows, linseed, or other mild vegetables, acidulated and rendered pleasant to the taste.

The dry and crufted tongue, the parched skin, and fervent heat, point out the neceffity of adminiftering large quantities of thefe diluting liquors; nor can the fymptoms poffibly abate whilft the patient labours under the horrors of intolerable thirft.

Cooling liquors will alfo contribute to the patient's relief, by promoting gentle fweats; thofe, together with the eafe of lying in bed, will remove that wearinefs and inactivity which are among the fymptoms of this difeafe. It is a common, but pernicious error, to advife perfons at the firft attack of fevers to ftruggle with them and keep on their legs, an attempt which only ferves to render the diforder more violent; the bed alone would in fome cafes flop a beginning fever, the pofture contri- buting to relax the fpafms and leffen the ardour of the circulation.

But the cuftom of exciting fweats in the beginning of fevers, by giving hot and volatile fudorific medicines, fhutting out the air, and fmothering the patient under loads of bed-cloaths, is attended with the moft destructive confequences, increafing the motion and heat of the blood already too violent, and adding fuel to the fire; nay, they are often fo far from producing a fweat, that they prevent it, by hurrying on the blood too rapidly to throw out the neceffary and required fecretion: the higher the fever, the lefs copious will be the excretory evacuations of perfpiration, urine, and faliva or fpittle.

Blifters alfo, which introduce an acrid falt into the blood, and ftimulate the fibres, are very improper in the beginning, at leaft of ardent fevers, or thofe of an inflammatory nature, where the reftriking power of the veffels is too great, and the motion of the fluids too rapid. Hot cordial medicines of all kinds are equally pernicious.

Cooling, emolient, and laxative clyfters,

are of great ufe in the cure of acute fevers, even at the very beginning, to bring off any hardened excrements which are frequently pent up in the inteftines, and to give a difcharge to any fharp and bilious matter which might otherwife, at leaft partly, be again taken back into the mafs of blood: thefe clyfters alfo ferve as a warm relaxing fomentation to the lower parts of the belly, relieving the head and ftomach, and promoting a difcharge of urine.

Purges of a gentle lenient nature are like- wife often of the greateft fervice, and they fhould be compofed either of manna, cream of tartar, common purging or Glauber's falts, rhubarb, tamarinds, or the like; violent active purges, and all hot pills of aloes, tinctures, &c. are pernicious; indeed, all profufe purging is hurtful: when nature feems to have a tendency that way, it may be proper firft to give rhubarb, and then a little of the *species à fcordio*, with an anodyne of poppy fyrup.

Frefh air is equally falutary and agreeable to a patient in a fever; it relieves the oppreffion of his breaft, contributes to cool the blood, and gives him fpirits: the abominable cuftom of clofing up windows and doors, and oppofing the poffibility of admitting a breath of air, has no doubt occafioned great part of the fatality which has ufually attended fevers; inftead of this infernal practice, let the fick room be constantly fupplied with fuch ftreams of frefh air as will render the degree of warmth agreeable to perfons in health. Nor will the ftream of vinegar or the fumes of aromatic herbs be inconvenient or prejudicial.

Unneceffary attendants, and vifitors from curiofity, fhould be excluded from the chambers of the fick; numbers of perfons breathing in a room vitiate the air of it; by being repeatedly breathed, it becomes unfit for refpiration, and acquires noxious qualities, equally hurtful to the fick, and dangerous to thofe who are of neceffity obliged to be about him.

Nor

Nor is the injury done to the air the only inconvenience which attends crouding a sick room with visitors and unnecessary guests: in all inflammatory disorders, the head is more or less affected, and the imagination disturbed; the spirits are in a flutter, and the mind subject to discomposure; in such a situation company cannot be even agreeable, and it is certainly extremely prejudicial.

Little caution is necessary with respect to the food of persons sick in fevers; they are seldom inclined to eat; nor should they be solicited to take any thing solid: abstinence assists the operations of the diluting liquors; nor will the patient require any other sustenance except now and then a roasted apple, or a little gruel, barley-water, or panada. Sweet things should be avoided, they tend to increase the thirst, and are apt to lie hard on the stomach.

But with respect to liquors, every precaution is necessary; wine and spirits are actual poison in all such fevers as are of an inflammatory nature, and will certainly heighten the disease instead of correcting it: even diluting liquors should be taken with care; the sick should be allowed to drink as freely and as often as they please, but not forced to load their stomachs with large draughts at a time, which create a nausea, indigestion, and wind, with great anxiety and restlessness, and in the event produce a vomiting or purging: besides, of the same quantity of liquor, more is likely to be imbibed by the absorbing vessels, which are planted thick from the mouth to the stomach, by sipping it down, than if swallowed at once in a full draught.

The weakened condition of body, and

disturbed state of mind in fevers, will frequently occasion longings and desires after particular kinds of liquids, &c. these should always be moderately gratified; what is earnestly longed after, the stomach will easily digest, and these gratifications will contribute greatly to a cure.

Fevers generally enfeeble the patient so much, as to endanger frequent relapses; great care should be taken to prevent him from taking cold, to divert his mind with cheerful and enlivening company, to bring him by degrees to endure the air and moderate exercise, and not only to consult his appetite so as to supply it with light and easily digested food, but to restrain him from taking immoderate quantities at a time, as the stomach is commonly voracious after most kinds of fevers.

Before we conclude this article, it may be right to mention, that *Clutton's Febrifuge Spirits* have been highly recommended as serviceable for fevers in general, of which the following is a composition.

Oil of sulphur by the bell and rightly prepared, rectified oil of vitriol, and spirit of salt, of each an equal quantity—and of rectified spirits of wine, three times the quantity of the whole. Digest them together for a month in moderate heat, then distil to dryness.

In ardent and inflammatory fevers, as much of this spirit as will render pure water of an agreeable acid, may be given in every draught of the patient's common drink; in those of the nervous or putrid kinds, it may be administered in the same proportion, in such cordial or antiputrescent liquors as are proper in the respective cases.

C H A P. III.

Of Intermitting Fevers, or such as are commonly called Agues.

AN *intermitting fever* quits the patient for a certain time and then returns, and when it is accompanied with cold fits of great violence or long continuance it is particularly called an *ague*.

Intermitting fevers or agues obtain different names, according to the time of the fit's returning. When the fit returns every day, it is called a *quotidian*; when it wholly intermits one day, it is said to be a *tertian*; and when the remission continues two whole days, it is a *quartan* ague: they are also distinguished as *vernal* and *autumnal* agues, because they generally appear at those seasons of the year; the former of which commences with the month of February, and the latter with that of August.

The common causes of agues, are a moist, foggy atmosphere, exhaling from standing or stagnate waters, and a swampy morassy soil; or a continuance of cold, rainy, thick, and heavy weather: they may also be occasioned by improper food, particularly such as is of a cold, watery, or windy nature; by a general poverty of diet; by lying upon the damp ground, or in damp houses, rooms, beds, or sheets; or from excessive fatigue either of body or mind.

These disorders may in general be prevented by attending to the cautions we have already given under the several heads of *diet*, *air*, *cleanliness*, *evacuations*, &c. they are frequently occasioned by irregularity or inattention; and though the approach of them may in many cases be avoided, they are difficult to remove, and often attended with symptoms of extreme danger.

The usual symptoms are heaviness, weariness, pains in the loins, limbs, and head; yawning, stretching, chillness in the extre-

mities, and violent shiverings and tremblings, particularly of the joints; a small low pulse, thirst, reaching, and sometimes a discharge of bilious matter by vomit; and in the hot fit, an intense burning of the whole body, redness and stretching of the skin, a strong quick pulse, watchfulness, short breath, delirium, and high-coloured urine without a sediment: as these symptoms gradually abate, an universal sweat succeeds, and soon terminates the fit.

On the day or days of remission, when none of the violent symptoms present themselves, the patient feels himself indisposed; a chillness and disposition to shiver accompany a slow weak pulse; his urine is thick and pale, and either deposits a sediment of a red colour resembling brick-dust, or contains a suspended cloud; it is also often frothy; but sometimes there is a very thin skin or film on the top of it, which seems also to adhere to the sides of the glass: and this observation on the urine; is peculiarly characteristic of the several kinds of agues or intermitting fevers.

In some constitutions, agues at first assume the appearance of ardent fevers, and then break into quotidians and tertians; nor is it uncommon for a quotidian or tertian to be forced by a very hot regimen at the beginning, or by violent heating liquors and spices administered as medicines, such as volatile spirits, brandy, pepper, and the like, into an inflammatory fever, with phrenzy, pleurisy, or peripneumony; and, on the other hand, intermitting fevers or agues are very often, especially in the autumnal season, disposed to sink into low irregular remittents, and even into slow, nervous, and putrid fevers: and the latter changes are frequently effected by im-
proper

proper evacuations of bleeding or purging, an unwholesome, gross, or glutinous diet, or dead rosy drinks, such as water from stagnate ponds, foul beer, or the like; and from the same causes intermitting fevers sometimes end in jaundice or fatal dropsies.

During the continuance of the ague fit, the patient may drink freely of diluting liquors, or if his spirits sink, white wine whey; but whatever is his drink, it should be acidulated either with juice of orange or lemon, or with Clutton's Febrifuge Spirit already mentioned; and every thing he takes should be warm, in order to bring on the perspiration.

His diet during the intermissions should be of a light and nourishing kind, such as broths of white meats, sago, bread puddings, or the like; animal food should be excluded: his ordinary drink may be weak wine negus, and lemonade, with a small quantity of brandy; and he may also take occasionally, a glass of white wine in which orange rind, gentian root, or bitters of the like kind, have been infused; and this, perhaps, will be a better administration of bitters, than the infusions of camomile, wormwood, or other bitter herbs, which are also recommended.

The natural disinclination to motion, which is one of the symptoms of these fevers, should by no means be indulged: if the patient's strength will admit of it, he should ride on horseback during the intervals; at any rate, he should take whatever exercise he can go through without being subject to great fatigue.

Before we proceed to speak of the medicine which is now so universally and successfully administered, it may be right to remark, that the treatment of intermitting fevers, in the early stages, ought to depend in a great measure on the symptoms, which will in most cases ascertain the particular nature and species of the disorder.

For instance, if the excessive heat, violent thirst, and delirium, give reason to

apprehend inflammation, bleeding may be proper; but this operation is not so generally necessary, as these symptoms do not often occur in intermittent cases.

But the stomach and bowels demand our attention, and must be cleansed before a cure can even be attempted; for this purpose, purges and vomits may both be necessary, though in many cases vomits alone will be effectual: the stomach is commonly burdened in these disorders with cold phlegm, and vomits will often discharge a considerable quantity of bile, which proves the propriety of this evacuation; from one scruple to half a dram of the powder of ipecacuanha will be sufficient for a grown person, and the quantity must be lessened in proportion for younger persons and children; and as the medicine operates, it may be promoted by tea of camomile flowers, with the addition of a little of the rind of orange.

Antimonial vomits of emetic tartar, from half a grain to a grain in an ounce of water, are also sometimes recommended, and the promotion of a sweat before the cold fit is expected to approach.

If purges are found necessary, they should be of rhubarb, jalap, or Glauber's salts, the quantities proportioned to the age and strength of the patient: one ounce of the salts, or a scruple of the jalap, will be a dose for a grown person, in an ounce of common water or any other simple vehicle; if the habit of body be cold and phlegmatic, it may be right to add to the jalap four or six drams of some aromatic or warm tincture.

After the inflammatory symptoms (if such appeared) have been removed or abated, by the several evacuations which the nature and violence of them pointed out, and which will generally be after three or four returns of the fits or paroxysms, the Peruvian bark may be safely administered in any way that will be most agreeable to the patient; if his stomach will bear the pow-
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der, no preparation will answer the purpose better.

One ounce of this bark finely powdered will make twelve doses, and may be taken in a glass of Port wine or claret, or any other liquid, or reduced to a bolus by the mixture of any syrup or jelly of fruit, as may best suit the patient's palate: these doses are calculated for grown persons; for youth, children, and persons of very tender and delicate habits, the quantities must be proportionably less.

In the quotidian or daily ague, one of these doses should be taken every two hours in the interval of the fit; in the tertian ague, or where there is an intermission of a day, once in three hours will be sufficient; and in the intervals of the quartan ague, or that which leaves the patient two days together without a fit, it will not be necessary to take the medicine oftener than every four hours.

For those who cannot take the bark in substance, the decoction or infusion of it may be prepared; the former by boiling two ounces of the bark and half an ounce of snake-root, both bruised, in two quarts of water until one half is consumed; this liquor should be strained or poured finely off, and mixed as it is used with an equal quantity of claret or port: a common wine-glassful of the mixture being a dose for a grown person, to be repeated as we have directed the bark in substance, and to be proportioned to age and strength in like manner.

Or half an ounce of the fine powder of the bark may be infused in a pint of white-wine; the bottle must be frequently shaken, and after it has stood four or five days, the liquor must be poured off perfectly fine, and taken in the quantity of a wine glass three or four times a day, or more or less often, according to the nature of the disorder, and the frequency of its return.

And here it may be necessary to observe, that our readers must not understand us to

mean, that the several quantities of these medicines which we have directed to be prepared at once, are always sufficient to effect a cure; or, that if the symptoms abate, the repetition of the medicine may be omitted: in some instances the disease will yield even to the quantities we have mentioned, but in other cases much more will be required. Nor is it sufficient that the use of the bark be continued till the fits are stopped; it should be repeated till all apprehensions of a return of the disorder are at an end, and even then should be left off gradually.

In some constitutions the bark cannot be swallowed in any form; in that case it may be injected in clysters of the following composition.

Two ounces of powdered bark boiled in a pound of common water, till it is reduced to half the quantity; to this liquor, finely strained, add half a dram of diascordium.

Let this clyster (proportioned as to quantity for children) be given very moderately warm, and repeated according the length of the intermission.

In some obstinate cases, and in cold and phlegmatic constitutions, or for persons advanced in years, it may be necessary to add to the bark some warm and aromatic medicines, such as snake-root or ginger, or even brandy or other spirits; and this may be also proper in damp and rainy seasons towards the close of autumn. But if the fits are violent or very frequent, or the symptoms are in any degree inflammatory, every thing of this kind must be omitted; and in that case, or in those agues which attack in the spring of the year, acids or salt of tartar may be added instead of the aromatics.

Where large quantities of the bark are disagreeable, the following infusion of bitters may supply the place of some part of that medicine, though it will by no means answer the purpose effectually, unless some bark is taken at the same time.

Take

Take of gentian root, one ounce—dried orange peel and lemon peel, of each half an ounce—coriander seeds, half an ounce—cardamums, two drams. Bruise the ingredients in a mortar, and pour boiling water on them to the quantity of a quart; of this infusion a tea-cupful may be taken three or four times a day, with the addition of a small quantity of syrup of lemons or oranges, to render it palatable.

Those with whom the infusion in water disagrees, may put half the quantity of the same ingredients into a bottle of white wine; let them infuse together forty-eight hours, shaking the bottle frequently; after that time it may be left a few hours to subside; and being carefully poured off or strained, a wine glass of it may be taken two or three times a day.

After the removal of an intermitting fever by the use of the bark, all purgative and laxative medicines must be omitted for a considerable length of time. Chalybeate waters are particularly recommended after agues.

Where children are afflicted with these diseases, the impossibility of inducing them to swallow sufficient quantities of the Peruvian bark, will render the cures more difficult; but even to infants it may be administered in clysters, adding a small quantity of sweet oil to the composition above prescribed, and always remembering to proportion the quantity to age and strength; our prescriptions being calculated for grown and strong persons, unless the contrary is particularly expressed.

But even if clysters of the bark should prove ineffectual with children, a waistcoat with the powder of the bark quilted between the folds may be worn next the skin; but it should be very frequently changed: bathing them, also, in a decoction of the bark, may be serviceable; and the spine of the back may likewise be often rubbed with spirits, or with a mixture of equal parts of laudanum, and that saponaceous liniment, which is commonly called opodeldoc.

To those who are obliged to spend their lives in unhealthy, low, damp, and swampy situations, and who are of course liable to frequent returns of agues and intermitting fevers, it may not be amiss, more especially at the seasons when they are usually visited by these diseases, to use some medicine by way of preventive; and the following seems well calculated to meet the approaching disorder, and may in many cases actually obviate the attack.

Take of Peruvian bark powdered, half an ounce—of Virginian snake-root, two drams—of dried orange and lemon-peel, of each a dram—cardamums, one scruple. Bruise the latter ingredients, and infuse the whole in a quart of brandy, Holland gin, or other genuine spirits; let it stand five or six days, frequently shaking the bottle, then pour it off fine, and drink a small wine-glassful twice in a day. The infusion should be made in wine for young people, and for such as are wholly unused to spirituous liquors.

To such as do not object to bitters, the bark chewed, or gentian root taken in the same way, will act as preventives; and the use of camomile tea, with orange peel, for breakfast, may be also recommended: bitters of almost every kind act as antidotes to intermittent fevers.

But though the unquestioned success of the bark, in the cure of the different species of agues, hath rendered the use of that excellent medicine almost universal, yet it may be expected that we mention some of the vast variety of nostrums and specifics, which for a length of time prevailed, and are still in daily use among female doctors and other notable people in almost every part of these kingdoms; yet though every one of them is celebrated for having performed a thousand cures, we do not offer them to our readers as approved or experienced medicines, nor recommend the use of them in preference to the Peruvian bark; on the contrary, we advise a reliance on that medicine,

medicine, as the most, if not the only, certain means of effectually and radically curing these diseases, without vitiating the humours, or destroying the constitution; but we present them as sanctioned by very common practice, and supported by the assertions of those who have conceived themselves to have been relieved by them; though we do ourselves entertain doubts, whether, when they have so far operated as to stop the fits, they may not be productive of some worse disease, either at present or in future; an apprehension which the heating, violent, and inflammatory compositions of some of these prescriptions will well justify: others are of so absurd and whimsical a nature, that the effect of them can only be on the imagination, which may possibly contribute to the expulsion of a disease, but we are inclined to believe will seldom accomplish it wholly, without the assistance of proper medicine.

Take grains of paradise and long pepper, of each a quarter of an ounce; beat them in a mortar as fine as possible, and then add a quarter of an ounce of powdered bark; mix these together, and make them into an electuary with a small tea-cupful of common treacle: and dividing the whole into three equal portions, let the patient take one immediately on the first approach of the shuddering or cold fit; another the instant it subsides and gives place to the fever; and the remainder the next morning fasting; carefully observing to wash down each portion with half a jill of the best French brandy.—Half these quantities will be sufficient for children under five years of age.

White cobweb, rolled into the form of a pill of the size of an ordinary pea, taken once, twice, or thrice, according to the length of the intervals between the fits.

Snuff of candle in honey, in quantity as much as will mix to a stiff electuary; a tea-spoonful to be taken in the evening preceding the expected return of the fit, and to be repeated the evening after the fit has passed off.

Slices of lemon thickly strewed with pepper and gunpowder, both finely powdered and in equal quantities, to be bound fast to the wrists on the approach of the fit. The patient to lie in bed till the fit is over, and an hour or two after.

Take a handful of groundsel shred small; put it in a paper bag *four inches square*, the side next the skin being pricked full of holes; cover the bag with fine linen, and wear it at the pit of the stomach. This remedy is to be applied two hours before the fit is expected, and renewed two hours before the apprehended returns of the succeeding fits.

Two small tea-spoonfuls of *sal prunella*, to be taken an hour before the usual time of the fit's coming on. *This is said to cure, thrice repeated only.*

Eat a small lemon, rind and all.

Apply to each wrist a plaster of treacle and foot, or a plaster of turpentine.

Take twenty grains of powdered saffron before the fit, in a glass of white-wine, repeating till the cure is effected.

Take sugar-candy, three drams—ginger, two drams—camphire, one dram. Reduce these ingredients to a fine powder; mix them, divide into six doses, and take one in warm water previous to the fit.

A volume would hardly contain the vast variety of prescriptions of this sort which are to be found among the respected manuscripts of most families, or which are handed down from mother to daughter, accompanied with traditionary legends of cures annexed to each, and authenticated by testimonies which we dare not venture to discredit: but we apprehend the specimen already given will be abundantly sufficient to gratify curiosity, the only use we wish those we have offered may be applied to, whilst a remedy so safe, speedy, and certain, as the Peruvian or Jesuit's bark, can be so readily and reasonably obtained.

Not but that we apprehend, in case of the real want of this invaluable medicine, either

either of the nostrums we have inserted may be tried without great apprehension of danger; and if the faith of the patient is strong enough to conceive a cure, it is not impossible but such a belief, concurring with the efforts of nature and a vigorous constitution, may go a considerable way towards the performance of it.

Nor would we be supposed to hold an opinion, that all simple remedies and prescriptions are inefficacious, and that their being

common and easily attained renders them of little value; on the contrary, we are convinced, that in many instances they are to be preferred to the complicated and elaborate prescriptions of the dispensatory, and it is from this conviction that we earnestly recommend the bark in all agues and intermitting fevers, as the most simple, though most effectual medicine, that can be met with in the shop of the apothecary, or the warehouse of the less regular practitioner.

CHAP. IV.

Of an Ardent or Inflammatory Fever.

THIS fever is also denominated *acute* and *continued*, because the symptoms are violent; and though they frequently abate and come on again with redoubled strength, yet they never totally remit until the disease itself is in some measure conquered.

Young persons, of vigorous and robust constitutions, active dispositions, and sanguine habits of body, and whose fibres are strong and elastic, are most liable to this fever; and it commonly prevails in the warmer seasons of the year, though sometimes in the spring.

Any thing which produces an extraordinary degree of heat, or what is commonly called a fulness of blood; excess in drinking strong liquors, or in eating high and rich food, or too large a quantity; whatever tends to check or obstruct perspiration, such as night air, damp linen, rooms or houses, sleeping on the earth, or drinking cold and small liquors when the body is heated; will produce this species of fever.

It may also be occasioned by a continued cold and dry air, impeding the emission of the same quantity of perspiration as in a more moist state of the weather; hence the

perspiration is detained in our bodies, and an undue accumulation of it destroys that equality of nature which is necessary to constitute health.

The symptoms of the *ardent* or *inflammatory fever*, are, at first, chillness and violent shiverings, a strong quick pulse, redness of the eyes, pains in the head, loins, back, and limbs; a dry and stretched skin, extreme heat, unquenchable thirst, white tongue, florid or flushed countenance, with anxiety, weariness, and restlessness.

To these succeed oppression of the breast and difficulty of breathing, nausea, sickness, and disposition to vomit, and the tongue grows more foul, and becomes of a black or dark brown colour.

At this period of the disease the more dangerous symptoms advance; and delirium, increased and most painful oppression of the breast, startings, twitchings, cold sweats, and urine passing away involuntarily, are signs of approaching death.

As the patient's extreme thirst will occasion perpetual calls for liquids, he should be supplied with gruel of oatmeal, or barley-water, as long as his stomach will bear these kinds of liquors; but as they are apt

to pall and excite sickness, they may have the addition of some agreeable acid, such as jellies of fruit, orange-juice, or the like; and should they even with these be disagreeable, apple water, baulm tea, or pure whey made with slices of four oranges or of lemons, may be substituted; cream of tartar whey, or vinegar whey, may also be used; and it is of importance to change the diluting liquors so often, as to continue them pleasing, and induce the patient to swallow them in small quantities very frequently.

A light decoction of the roots or leaves of marsh-mallows, or of the common mallow, in three quarts of which may be boiled (especially if the patient is costive) two ounces of tamarinds and a quarter of a pound of stoned raisins, will be found a very agreeable liquor, and serve also as a nourishing aliment.

Persons in fevers have seldom much appetite to eat, nor should they be invited to it; however, when any such inclination offers, it may be satisfied with roasted apples, jellies of fruit, stewed prunes, and water-gruel or panada; if the patient requires any thing more solid, it may be biscuits without butter, or toasted bread.

Above all things, keeping the chamber of the sick well aired, sprinkled with warm vinegar, and fumigated with the flowers of lavender, is of great importance: in the admission of fresh air, care should be taken that the patient does not get cold; and the most effectual caution is, to move the bed out of the current of air, and let him hold a handkerchief to his mouth and nostrils, whilst the doors or windows remain open.

Bathing the extremities frequently in warm water, will tend to relieve the head-ach; and a gargle of baulm-tea sweetened with honey, and acidulated with black currant jelly, will take off the disagreeable taste in the mouth, and prevent the tongue from being loaded.

If the patient is restless, and not inclined to sweat, it may be right to change his posture now and then, either setting him up in the bed, or raising his head with pillows; but it will by no means be proper to move him if any disposition appears to perspire.

Nor will perspiration be promoted by laying on vast quantities of bed-cloaths; which, on the contrary, rather retard it, by increasing the heat and circulation of the blood beyond that degree which is required to throw off the noxious matter: a sweat is best excited by a proper quantity of cooling and diluting liquors, which at the same time quench the patient's thirst, and abate the pains of the breast and difficulty of breathing.

We have already strongly enforced the necessity of keeping the patient quiet in every species of fever, and preventing his room from being crowded by unnecessary company; in no one disorder is this precaution more requisite than that of which we now treat: inflammatory fevers are so commonly attended with delirium, that too much care cannot be taken to prevent the least disturbance or hurry of the spirits; even the light must be excluded if it proves offensive.

On the first appearance of inflammatory symptoms, and as early as it is possible to ascertain the nature of the disorder which threatens, the operation of bleeding is in general absolutely necessary; and unless any suspicions arise that the full, hard, and quick pulse, and other concomitant feverish appearances, indicate some other disease, or it be forbidden by extreme age, or any other constitutional cause, this operation should not be delayed: the quantity of blood drawn must depend on the strength, habit of body, and other circumstances. If, after the bleeding, the inflammatory symptoms abate, the pulse becomes soft, and the pains in the head and breast are less troublesome, it will not be right to repeat it; but if the first bleeding does not

answer

answer these purposes, but the fever should increase, and the pulse grow more hard and quick, it may be repeated a second and third time, or even oftener, allowing such intervals as the situation of the patient or the violence of the symptoms demand.

But it may be necessary to guard against too speedy an application of the lancet, by remarking, that the appearance of the flow and putrid fever sometimes commences with symptoms very nearly approaching to those of the inflammatory, and that in case of any such tendency bleeding may be prejudicial.

On the other hand, if the other symptoms concur in denoting inflammation, an *oppressed* pulse is not always to be considered as a sufficient reason for the omission of this operation; in such cases these vibrations frequently become more free and strong after bleeding; and very able and ingenious physicians advise the operator, if he is in doubt as to the safety or propriety of letting blood, to apply his finger to the pulse in one arm, whilst the blood flows from the other; and if he finds it flag considerably, flutter, or intermit, to stop the blood, but if it beats stronger or more open, he may proceed with safety and success.

Persons who from a laxity of the fibres, and for want of due elasticity, are apt to faint on bleeding, should always lie down on a bed or sofa to have this operation performed; in the course of which, it will be right to stop the orifice frequently for a short time, especially where the load of humours threatens to overbear the powers of the heart, which is commonly the case when the pulse is oppressed.

Bleeding being first performed, which in full and sanguine habits is in this disorder always necessary, a vomit may be very proper, especially where nausea or sickness creates any suspicion of a foul stomach; in that case, warm water or tea of camomile may prove sufficient to assist the efforts of nature; but in strong, vigorous constitutions, and where the stomach

seems to be considerably loaded, some emetic medicine may be necessary; in which case, either of the following may be administered, as the circumstances require.

One ounce of emetic or ipecacuanha wine, taken in the morning; and the vomiting to be promoted by plentiful draughts of camomile tea or barley water.

Or, of tartar emetic, one grain—powder of crab's claws, half a scruple. Mix them well to a fine powder, and administer in two table-spoonfuls of any simple-water.

If this powder excites sickness and an inclination to vomit, let it be promoted as before directed; but it frequently procures a stool or two, and occasions a perspiration which carries off the disease: however, it is only proper on the first, second, or third day after the seizure, or towards the latter end of it, if the patient's strength is not exhausted.

If the nausea and sickness do not abate after vomiting, the following saline draught may be given.

Common simple mint water, one ounce—lemon-juice, half an ounce—salt of wormwood, one scruple—nutmeg-water and simple syrup, of each one dram. To be taken every six hours.

If a cough should attend this fever, as sometimes is the case, add to this draught half a dram of spermaceti mixed with yolk of egg; and if it is necessary to promote perspiration, one scruple of powder of contrayerva may also be added.

If the patient should be costive, clysters of milk and water, to the quantity of a pint or more, with two drams of the common purging salts, and a spoonful of sweet olive-oil, may be administered once a day; common salt will answer the purpose as well as the purging salts. A tea-spoonful of magnesia or cream of tartar may also be given in his common drink till regular stools

are

are obtained. The roasted apples, jellies of fruits, and other acids, which we have recommended for food, will also contribute to keep the body open, which should by no means be neglected.

A diarrhœa may be critical, and should be attended to very carefully; but no endeavours should be used to stop it unless it appears to exhaust the patient's strength: when from the occurrence of that circumstance it seems necessary to check it, the following medicines will answer that purpose.

Take of the powder of ipecacuanha, three grains—of contrayerva, twelve grains. Make into a bolus with simple syrup, and repeat every two or three hours.

Also, take of the common chalk julep, four ounces—of tinctura Japonica, or tincture of Japan earth, half an ounce. Of this mixture take two spoonfuls after every loose stool.

About the fifth or sixth day after the attack of this disorder, there is generally some difficulty to keep up the vital heat to that degree which is necessary for the recovery of health, or for the due performance of the secretion of that matter which is required to be thrown off; and in this case, light broths and gentle medicines, tending to promote perspiration, will be necessary.

The inflammatory fever generally draws towards a crisis, from the tenth to the twelfth day. If about this time the pulse softens, the tongue becomes less dry and discoloured, and the urine begins to shew the brick-coloured sediment; if the patient's strength seems to support him, his spirits remain tolerably good and undisturbed, and his faculties clear; great hopes may be entertained of his recovery.

But if, on the contrary, a languor of spirits accompanies a falling or irregular pulse, with frequent starting and twitches of the tendons; if his breath is drawn with an increase of difficulty, and his understand-

ing grows confused, and is clouded with stupefaction, or lost in delirium; it will be necessary to use every means that can be devised, to obviate the fatal consequences which these symptoms threaten.

For this purpose blisters may be applied to the head, neck, arms, and thighs, together with sinapisms or poultices of the following composition.

Take crumb of bread and flour of mustard, in equal quantities—heat strong vinegar boiling hot, and pour over these ingredients. When the bread is sufficiently softened, mix all together, and apply on leather or thick linen cloths to the soles of the feet.

Scraped horse-radish may be used instead of mustard, and garlick bruised is said to supply the want of both, and to have often produced the happiest effects.

There are also some other symptoms, which though not usual, yet sometimes occur in the course of acute fevers, such as bloody urine, and a violent hiccup. For the former of these complaints the following powder.

Powder of gum tragacanth, one scruple—nitre five grains—Armenian bole, half a dram; powdered and well mixed together, taken every four hours in three spoonfuls of tincture of roses: to each dose may be added three drops of the Thebaic tincture, or liquid laudanum.

For the hiccups, the following musk julep.

Musk rubbed with white sugar, half a dram—simple cinnamon-water, five ounces. Make a julep, and administer two spoonfuls every third hour.

If this symptom is vehement, it may be necessary to repeat oftener.

But it frequently happens, that these fevers run on for a very considerable length of time, without either of the last mentioned,

tioned, or indeed any other remarkable or very violent symptom; in these cases, regimen, air, diluting liquors, and a watchful attention to assist the efforts of nature, will in general effect the cure; our principal care will be to check the too violent circulation of the blood, and so to moderate it's motion as to restrain it as much as possible within those bounds which nature has prescribed, and the excess of which constitutes this disease.

Nor is a regard to regimen only necessary during the continuance of this fever, it must be extended long beyond the apparent cure, or there will be a very considerable degree of danger, not only of a relapse, but of disagreeable consequences; such as ulcers, boils, and settled swellings in particular limbs: to obviate these, the diet should be light and principally vegetable; moderate quantities only should be taken at each meal; and every species of excess, not only of eating and drinking, but even in exercise, amusements, and mental application, should be avoided. The body and mind both require indulgence after the severity of such a disease.

The bark may very properly come in to finish the cure; a light decoction of the powder in water, or an infusion in white wine, and the quantity of a wine-glass taken once or twice in a day, will effectually allay any remaining heats, assist digestion, and strengthen the stomach: should any fever still lurk in the habit, this medi-

cine is, of all others, best calculated to expel it.

It is by no means right, though commonly practised, to begin a course of purging immediately upon recovery from an acute fever; it will be time enough to apply to laxative medicines, when the patient has acquired tolerable strength, and even then they ought to be extremely gentle, such as manna, fenna, or the like. The following mixture will answer this purpose, and is perfectly innocent and agreeable.

Half an ounce of tamarinds—half a dram of the leaves of fenna. Pour boiling water on these to the quantity of half a pint; stir all well together, then let this mixture subside; pour it off fine, and dissolve in it half an ounce of the purest manna: take a fourth part, and repeat every hour till it operates.

If faintness, languor, and great weakness, should succeed this fever, recourse must be had to change of air, saline draughts, and asses milk; and should it leave a troublesome cough, the directions we have given under the article of *consumptions* should be carefully attended to: when the body is weakened by disease it is most liable to colds; and these occasioning coughs, and inflammations on the lungs, are frequently productive of the last-mentioned disorder; and thus, for want of proper care, the fever is only exchanged for a more lingering, but no less fatal malady.

C H A P. V.

Of the Nervous or Slow Fever.

THIS fever differs entirely from the inflammatory, and the following are the usual causes, and most remarkable symptoms, of this dangerous and deceitful disorder.

The causes are, excess of the passions, particularly those of anger or grief; violent impressions of fear; indolence, or exercise beyond the natural strength of the body; too great eagerness after, or attention to business or pleasure; want of sleep; irregularity in the general manner of living; and particularly in diet; poor watery food; unripe fruits; a cold and damp, or a cold and moist air; sudden and great changes in the weather; obstructed or defective perspiration, excessive evacuation, or whatever tends to diminish animal strength.

Nervous fevers are sometimes the effects of other disorders, or rather of the methods of cure; such as salivation, violent purges, and the like.

The symptoms of this fever are numerous and various, resembling almost every disease which affects the human frame, so that it is often extremely difficult to distinguish it accurately; yet the following description comprehends most if not all the signs which generally occur.

The patient at first grows somewhat listless, and feels slight chills and shudders, with uncertain and sudden flushes of heat, and that kind of weariness all over which is felt after great fatigue: this is always attended with a kind of heaviness and dejection of spirits, and more or less of a load, pain, or giddiness of the head; a nausea and disrelish of every thing soon follows, without any considerable thirst, but frequently with urging to vomit, though nothing comes up but insipid phlegm.

Though a kind of lucid interval of several hours sometimes intervenes, yet the symptoms return with aggravation, especially towards night; the head grows more heavy and giddy, the heats greater, the pulse quicker, but weak, with an oppression of breathing; a great weight, or obtuse pain and coldness, affects the hinder part of the head frequently, and oftentimes a heavy pain is felt all over the crown of the head; both these pains generally attend nervous fevers, and are commonly succeeded by some degree of delirium.

In this condition the patient often continues for five or six days with a heavy, pale, sunk countenance, seeming not very sick, and yet far from being well; restless, anxious, and commonly quite void of sleep, though sometimes very drowsy and heavy; but although he appears to those about him actually to sleep, yet he is so insensible of it himself, as to deny his having slept at all.

The pulse during all this time is quick, weak, and unequal; sometimes fluttering, and sometimes for a few minutes slow, and even intermitting; and then, with a sudden flush in the face, immediately becoming very quick; and, perhaps, soon after surprizingly calm and equal, and thus alternately. The heats and chills also are as uncertain and unequal; sometimes a sudden colour and glow in the cheeks, whilst the top of the nose and ears is cold, and the forehead at the same time in a cold dewy sweat; nay, it is by no means uncommon for a high colour and heat to appear in the face, when the extremities are quite cold.

The urine is commonly pale, and often limpid as water; frequently of a whey colour, or like dead small-beer; and either
dropping

dropping no manner of sediment, or having a kind of loose matter like bran irregularly floating up and down in it: the tongue at the beginning is seldom or ever dry or discoloured, but sometimes covered with a thin whitish mucus or matter; towards the close of the disease, indeed, it often appears very dry, red, and chopped, or of the colour of pomgranate rind; yet, however dry the tongue and lips seem, the patient scarce ever complains of thirst, but sometimes of a heat in the tongue.

About the seventh or eighth day, the giddiness, heaviness, or pain of the head, become much greater, with a constant noise in it like the tinkling of a bell in the ear, which is very disturbing to the sick, and frequently brings on a delirium; the load on the breast and stomach, anxiety, and faintness, grow much more urgent; and if the patient attempts to sit up, he sometimes actually faints away, and loses all sense and motion: coldish sweats suddenly come on in the forehead, and on the backs of the hands, (though at the same time the cheeks and the palms have too much heat) and as suddenly go off. If the urine now grows more pale or limpid, a delirium is certainly to be expected, with universal tremors and involuntary twitchings: the delirium which attends this disorder is seldom violent, but rather a confusion of thought and action; the unfortunate patients muttering continually to themselves, and faulting in their speech; sometimes they appear in a hurry and confused on first awaking, but recollect themselves immediately, continue sensible and intelligent for a few minutes, and then fall again into the same dozing and muttering state as before.

At the height of the disorder, the tongue often grows very dry, especially in the middle part, with a yellowish list or streak on each side, and when the patient attempts to put it out, it trembles exceedingly: if, at this period of the disease, the tongue becomes more moist, and a copious spitting

comes on, it is always a good sign; but a difficulty of swallowing, and a continual gulping or choaking in the throat, are very dangerous symptoms, especially if attended with any degree of hiccup.

Profuse sweats frequently pour forth at once about the ninth, tenth, or twelfth day, the extremities remaining coldish and clammy; and thin stools are also about this time discharged, which are generally wasting and weakening: but a general warm moisture on the skin is salutary, and a gentle diarrhœa frequently relieves both the delirium and heaviness.

After this time no favourable symptoms appearing, nature sinks apace; the extremities grow cold, the nails pale or livid; the pulse may rather be said to tremble and flutter than to beat, the strokes being so exceedingly quick and weak as not to be counted, and scarce to be distinguished, though sometimes they creep on surprisingly slow, and at others intermit; the sick becomes in a manner insensible and stupid, and is scarce affected by the loudest noise or the most piercing light, though at the beginning of the disease the impressions of either were troublesome and offensive: the delirium now ends in profound sleep, from which the patient never awakes; or the stools, urine, and tears, running off involuntarily, foretel speedy dissolution, and the vast tremblings and twitchings of the nerves and tendons, are preludes to a general convulsion, which at once breaks short the thread of life. In one or other of these ways the patient generally dies, after having endured the complicated horrors of this disease for a fortnight, or in some instances three, and even four weeks.

All persons afflicted with this disorder grow deaf, and in a certain degree insensible, towards the close of it, though one of the beginning symptoms is too great sensibility of noise and even of light; extreme apprehension of danger seems also to be a constant attendant on this fever, which

is frequently brought on by this very means. Instances are not unfrequent of persons suffering such terrors from the possibility of going off in a sleeping fit, or of the perturbation of spirits in which those who are sick in this disease generally awake, that they have actually endeavoured to avoid sleeping at all.

It sometimes happens that the deafness terminates in imposthumes of the ears; this is a favourable sign: if abscesses form behind or below the ear and come to matter, these, and eruptions about the nose and mouth, are also symptoms of recovery.

The appearance of this disease hath been so frequent of late years, and the necessity for a very minute description of the causes, symptoms, and various appearances, becoming daily more apparent, we are persuaded our readers will not be displeased to find, that we have not only fully and attentively considered this disease ourselves, but have also consulted the various eminent and ingenious writers, on a subject which hath been more lightly and loosely treated in some modern publications, than we apprehend a matter of such high and too general importance deserves. Nor do we, with the writers of these publications, conceive, that little more is necessary to the cure of nervous fevers, than large and frequent draughts of wine: we have known many persons unhappily reduced to these disorders by an over free use of that palatable cordial; but we confess we never met with any case where that alone hath effected a cure.

Yet do we not advise the same, or a similar regimen, to that which is suitable to acute or ardent fevers; in those of the nervous kind, diluting liquors are also necessary, though not in such quantities as in inflammatory cases, but sufficient to support some degree of perspiration, and to supply fresh fluids instead of those which are by this means carried off: to these liquors may be added a moderate proportion of wine, which, as well as lemon and

orange juice, may also be used in such spoon meats as constitute the patient's food, and which may be panada, hartshorn-jelly, sago, or the like. Towards the going off of the fever, thin chicken broth will be useful, being both diluting and nourishing.

Nor do we altogether approve of the cool regimen with respect to air, liquors, &c. for reasons which will appear in our directions for the medical treatment of this disease.

The repetition of injunctions to keep the patient's mind easy and quiet, to flatter him with hopes of recovery, and to prevent him from being haunted with *gloomy or frightful* ideas, we hold to be unnecessary. There is not a disorder in the whole catalogue of maladies to which the same advice does not apply; nor can we conceive any set of beings, attendant on the sick, so stupid or inhuman as not to have suggestions of the same kind present themselves, without their being regularly inculcated in treating of each particular disease.

In this fever considerable evacuations are to be avoided, and in particular bleeding; and this caution is more necessary in persons of lax and weakly constitutions. Purges, especially strong and active ones, are generally pernicious; yet it may sometimes be necessary to clear the first passages by a little manna or rhubarb, and by a gentle emetic of ipecacuanha, in case of nausea, sickness, or load at the stomach, which frequently occur at the commencement of this fever. If the patient is of a costive habit, or nature wants relief by stools, clysters of the common composition, milk, coarse sugar, and salt, may be administered every other day, or every third day at farthest.

In the early stages of this disease, remedies of the milder kind, to promote perspiration, and such as are in some measure cordial, seem most applicable: among these, the following draught may be recommended.

Common

Common water, one ounce and a half—spermaceti, one scruple—powder of contrayerva, one scruple—syrup of saffron, one dram. To be taken once in six hours.

In case the contrayerva should heat, or promote too great a degree of sweating, it may be exchanged for the same quantity of compound powder of crabs claws.

Though profuse sweats are not to be encouraged, yet gentle perspirations are attended with agreeable consequences; they relieve the patient from heats, quiet the anxiety and flutter, and keep him more easy than in any other state.

If violent sweats should have been imprudently excited by the use of volatile spirits, or other hot medicines, they frequently occasion that drooping of the spirits, and those startings and twitchings we have before described, which sometimes end in spasms, cold or clammy sweats and faintings, or heaviness to sleep; and sometimes heats and flushes succeed, partially and irregularly, and accompanied with restlessness, anxiety of mind, loss of reason, difficulty of breathing, and great oppression on the breast and stomach; yet, though the last-mentioned symptoms seem to indicate inflammation of the lungs, bleeding is by no means to be attempted: the urine and the state of the pulse, which even, with the complaints last mentioned, will be weak, unequal, and fluttering, though probably quick, are sufficient to deter us from this operation. The difficulty of breathing really arises from some spasm on the vital parts, and is not in this case to be attributed to inflammation.

But in this state of the disease, blisters should be applied to the arms, thighs, or legs, and the following bolus and draught may be administered every fifth, sixth, seventh, or eighth hour, according to the urgency of the symptoms.

Take of powder of contrayerva, twelve grains—of English saffron, three grains—of Ra-

leigh's confection, one scruple. Make into a bolus with syrup of saffron.

Common purging salts, half a scruple—lemon juice, four drams—common mint-water, one ounce and half. After the effervescence or boiling occasioned by this mixture is past, add of spirit of lavender, one dram and a half—and the like quantity of syrup of saffron; and make a draught.

When the tremors or twitches are violent, musk, to the quantity of six or eight grains, may be substituted for the contrayerva powder.

The volatile aromatic spirit, or the foetid volatile spirit, to the quantity of two or three drams, may be occasionally administered in whey made from wine, cyder, or mustard; the latter, which is generally within the reach of even the poor, is a medicine which may be found extremely serviceable.

Or a cordial julep may be prepared as follows.

Take of simple cinnamon-water, two ounces—of nutmeg-water, two ounces—of volatile aromatic spirit, one dram—of the volatile foetid spirit, one dram—syrup of orange-peel, half an ounce.

Of this julep two or three spoonfuls may be given whenever the patient's spirits sink, or he appears to labour under particular anxiety.

About the seventh, ninth, or eleventh days of this fever, an eruption of a miliary appearance frequently shews itself; a symptom which will be foretold by the difficulty of breathing, and oppression on the breast and stomach; and great care should be taken not to check the efforts of nature in this particular symptom, which is sometimes critical; on the contrary, the eruption should be encouraged, by diluting liquors and soft and mild cordials, to which may be added in some cases a small quantity of *theriacal Andromachi*, or *elixir asthmaticum*;
R r such

such mild opiates contributing to calm and allay the perturbation of spirits, which is usually a complaint in this disease, and also to promote those breathing sweats, with which the eruption will advance in a more easy and kindly manner.

But as we have already observed, profuse sweats are seldom or ever of advantage in the earlier period of this disorder, so neither are they more so in this advanced state of it, even though they should occasion a very large appearance of eruption; for when these pustules are accompanied with great sweats, several crops of them will frequently succeed each other, and instead of affording the patient relief, reduce him to extreme weakness.

In such wasting and profuse sweats, a little old and unadulterated Port wine or claret, diluted or not, as circumstances direct, may be used to great advantage; but *the quantity of a bottle or two in a day* we can by no means recommend: however such a course *may* have been attended with success, it is an experiment of which we cannot advise a trial.

As the fever declines, and the symptoms are become less violent, if the sweats continue so abundant as to be considerably weakening, the bark may be administered; and will in some instances render the intermissions, which frequently take place as the disease goes off, more distinct and observable, and will also considerably shorten the duration of these fevers, and prevent the danger of relapses, which are frequently more difficult to overcome than the first attacks.

The bark may be given in the following form; small doses of rhubarb, or manna dissolved in the infusion of fenna, being first directed, and more especially if the patient should be costive.

Take of Peruvian bark powdered, two ounces
—of the rind of Seville oranges, two ounces—Virginian snake-root, three drams
—English saffron, four scruples—cochineal,

two scruples—French brandy, twenty-four ounces. Infuse the ingredients in a vessel closely stopped three or four days, and then strain or pour off fine.

Of this infusion give from one dram to half an ounce, according to age, strength, and other circumstances, every fourth, sixth, or eighth hour, in a glass of wine, or wine and water; adding to every dose from ten to twenty drops of the vitriolic elixir.

A gentle diarrhoea, or moderate purging, in the declension of this fever, may be considered as a favourable circumstance; but when the stools are crude, thin, and acrid, or of a livid colour, or like that of lead, they are so far from being beneficial, that they weaken and sink the patient exceedingly: when this discharge is violent, and attended with the appearances just mentioned, it may be restrained by a mild and cordial opiate, such as the *iberiaca Andromachi*, which quiets the irritation, and promoting perspiration, moderates the purging; but all violent astringents should be avoided, as they tend equally to stop the flux too suddenly, and to check the efforts of nature in the discharges through the pores.

Among the evacuations which may be considered as leading to health, there is none of a more favourable kind than that of a salivation, or copious spitting, provided it is unaccompanied with those eruptions in the mouth and throat, which have the appearance of the thrush; but if this should happen, it will be necessary to wash the mouth and throat freely and frequently with the following gargle.

Barley-water, two ounces—honey of roses, half an ounce—tincture of myrrh, two drams.

But if these ingredients are not at hand, syrup of black currants with warm water may be very successfully used.

Towards the decline of this disease, it is usual

usual to dry up the blisters, as no longer necessary: but this is by no means advisable; on the contrary, such discharge is at this stage of particular use, and the more considerable it is, the better in general. Ulcerations about the blistered parts have been thought favourable symptoms; and where these do not happen, the drains should be kept open for some time, or fresh blisters applied to other parts of the body.

When the symptoms have entirely disappeared, leaving no reason to apprehend a relapse, proper attention to a change of diet will be necessary: and if to light and nourishing food, such as milk chocolate, jellies, sago, or salop, for breakfast and supper, and dinners of mutton or beef-tea, with biscuit, and boiled chicken, or fish of the most delicate kinds; be added change of air, gentle exercise, and the use of asses milk—the recovery of strength will be more speedy than even after acute fevers.

But some instances occur, where from the continuance of the deafness, for a very considerable time after the cure of the disorder, the faculties will appear to be impaired, but will be evidently restored, upon the removal of that impediment to apprehension: more melancholy cases sometimes but not very frequently happen; where, under these circumstances, reason actually receives

irreparable injury, and though the unfortunate patient escapes the fatality of the disease, his recovery may be deemed a misfortune, as he degenerates into a state of idiocy, from whence he is rarely or ever brought back to any degree of sense.

Upon the whole it will appear, that in all slow and nervous fevers, whether of the miliary kind (that is to say, accompanied with eruptions) or not, the great end of medicine should be, to assist the operations and efforts of nature, and to join in supporting the patient to undergo them; and that, too, in such a manner, as may perfectly agree with the general laws of animal œconomy; lending the aid of art to procure discharges where those of nature are deficient, and exerting the same powers to repel or restrain evacuations, where their profuseness or inordinacy threatens wasting or weakening that strength which is so absolutely necessary to carry the patient through this tedious disease: but in which ever way the assistance of art is required, great care should be taken never to pervert or counteract any symptom tending to a particular crisis, which observation and experience have found salutary and regular; but, on the contrary, so to direct our endeavours, as to favour the approach of such symptoms, and the perfecting them to the desired crisis.

C H A P. VI.

Of the Putrid, Malignant, Spotted, or Pestilential Fever.

THESE fevers, though differently described, include also *gaol* and *camp* fevers; and, in general, all such as are generated by putridity of the air or blood.

Such persons are most subject to these diseases as are of weakly habits and constitutions; those who labour hardly, and live

poorly; those who live luxuriously, and use little exercise; and such as have lost the vigour of their constitutions by violent operations of medicine in the cure of obstinate disorders; persons who, from the necessities of business, or a dissipated ardour after amusements, are over-watched; and those

those whose habits are constitutionally cold, phlegmatic, or irritable: those also are most liable to these fevers, who indulge the passion of grief immoderately, or fix their thoughts too intensely on particular objects or pursuits.

Hence it will appear, that these diseases may be caused by improper food; and of that, such animal flesh as is in a state of rotteness before it is eaten; corn which has been damaged by being laid up before it was properly dried, or which has received accidental moisture afterwards; and dead, vapid liquors, drank in considerable quantities.

The weather and disposition of the air also frequently occasion these diseases; a moist atmosphere, with considerable heat, and a south wind of long continuance, with a close and sultry sky, are commonly productive of putrid disorders.

In gaols, camps, and other crowded or confined buildings, these disorders often originate in filth and nastiness; and in all close apartments, the air, by being frequently breathed, becomes highly putrid, and begets diseases of the like kind.

But the more common cause of these fevers is infection, by which the contagious matter is received into the lungs by inspiration, or drawing the breath, or carried into the stomach with the food we swallow; these diseases are also sometimes produced by the absorption of matter from any ulcers, wounds, or sores, which becoming putrid, a portion of that matter is taken into the blood, and corrupts the whole mass.

The symptoms, as excited by different manners of receiving infection, have been nicely distinguished: if it is received from the atmosphere by the lungs, the symptoms which first appear are said to be of the nervous kind; if the stomach is first affected by swallowing the contagious effluvia with the food, sickness, vomiting, and restlessness, are the first consequences; and

if the blood takes in diseased matter by absorption—heat, delirium, high-coloured urine, diarrhœa, and other symptoms of the like kind, follow.

The ordinary symptoms of this class of fevers, are shiverings or rather shudderings, more violent than those with which the slow nervous fevers attack; heats much sharper and more permanent, though at first sudden, transient, and differing in degrees at different times.

The pulse more strong and hard, but commonly quick and small, sometimes slow and seemingly regular for a time, and then becoming unequal and fluttering; violent head-ach, or more commonly giddiness; an oppression of the spirits, and disinclination to all motion; a nausea and disposition to vomit; a severe fixed pain is sometimes felt in one, and at other times in both temples, or over one or both eyebrows, and frequently in the bottom of the orbit or socket of the eye; the eyes themselves always appear full, heavy, yellowish, and often rather inflamed; the countenance seems bloated, and more dead-coloured than usual; the temporal arteries throb much, and a ringing in the ears is extremely troublesome; a strong vibration of those arteries which pass before the ears frequently takes place, though the pulse at the wrists may at the same time be small and slow. When this symptom occurs, it denotes approaching delirium, proceeding generally from some considerable obstructions in the brain.

The dejection of spirits, languor, and weakness, often come on in a manner surprisingly sudden, and that too without any violent or extraordinary evacuation, and even sometimes when the pulse is tolerably strong. The breathing is also commonly attended with great difficulty, which occasions a kind of involuntary sighing or sobbing, and the breath is fiery and offensive.

These fevers are seldom unaccompanied with pains in the loins and back; an universal

versal forenefs, and a wearinefs which seems as if it proceeded from some violent exercise; pains in the limbs, are sometimes felt with severity; and the pit of the stomach is affected with pain and a great heat and load, which is attended with perpetual vomiting of black choler and a very disagreeable hiccup, and the matter thrown up is frequently very offensive to the smell.

The tongue, which is generally white at the beginning, grows more dark and dry as the disease proceeds; sometimes becomes of a livid colour; with a kind of dark bubble at the top, and at other times grows exceeding black, and not only continues so for many days in the progress of the disease, but in appearance wears off slowly even after a favourable crisis: at the height of the disorder it is not only black, but becomes dry and rigid, or sometimes changes to the colour of pomegranate rind; and this condition of the tongue occasions the speech to be so inarticulate, as to be scarcely intelligible.

Thirst is a very uncertain symptom; at some times it is so great as to be actually unquenchable, yet every drink that is offered is disagreeable to the palate, the state of the tongue communicating the same taste to every liquid; in other instances, though the whole mouth and tongue are parched, dry, and furred, yet no thirst is complained of, and this is a symptom of danger threatening phrenzy or lethargy. The lips, and even the teeth, partake of the foulness of the mouth and tongue.

The urine, at the first attack of this fever, is frequently crude, pale, and foulish, but grows higher coloured as the disease advances, and assumes the appearance of a very strong lye, or of being tinged with a very small quantity of blood; it is then without the smallest sediment or cloud, and this aspect continues for many days together; by degrees it becomes darker, appears like dead strong-beer of a very high colour, and the smell of it is extremely

rank and offensive: in spotted fevers it is almost black, and intolerably stinking.

Towards the height, or in the decline of the distemper, the stools are for the most part insufferably offensive, livid, black, or green, and discharged with severe griping, and even blood; the more they incline to yellow or brown, the less is the danger; but whenever they pass involuntarily, of whatever colour, it is extreme: after profuse evacuations of this sort the belly will in some instances appear swelled, distended, and hard; this is also a very unpromising symptom, too often denoting that the intestines are inflamed and tend to mortification. Nature sometimes prompts a gentle diarrhoea to carry off the diseased matter, and this proves highly beneficial.

But the malignity of this disease is in no symptom so discoverable as in the appearance of black, livid, dun-coloured, or greenish spots; when the black or violet-coloured blotches become of a brighter colour, or appear florid, the less danger may be apprehended. The larger black or livid spots are almost constantly attended with profuse discharges of blood, which burst from the nose, eyes, mouth, and ears; nor are the small, dusky, brown spots, resembling freckles, less dangerous, though they are not often accompanied with the fluxes of blood. The time when these spots appear, is extremely uncertain; sometimes they begin to shew themselves on the fourth or fifth day, and in other instances not till even after the eleventh: the large livid, or dark greenish blotches or marks, seldom approach till a very fatal period draws near. An efflorescence or partial eruption, like the measles, is not uncommon in malignant fevers, but of a more faint and dull hue, variegating and marbling the skin, particularly on the breast: this is also an ill omen, and is generally attended with the worst consequences.

Profuse sweats sometimes come on from the eleventh to the fourteenth day, and the

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spots

spots disappearing, vast numbers of small, white, milliary pustules come out; but this change seldom produces any thing favourable. If, on the going off of the spots, a rash of a lively red colour succeeds, accompanied with itching and smarting, it commonly proves a very considerable relief; as well as large, watery, fretting bladders, which sometimes rise on the back, breast, and shoulders: scabby eruptions also about the mouth and nose are among the salutary symptoms, and the more fiery and inflamed they are the better; but a thrush, or pimples on the mouth and throat, whether of a dark brown colour, or those which, being white like lard and thick, wear a more promising aspect, are of a very uncertain and dangerous nature, and are in general speedily succeeded by inability to swallow without extreme difficulty, ulceration of the passages into the throat, and of the gullet itself; and by an incessant and violently convulsive hiccup, all the first passages become at last affected, a bloody dysentery comes on, and is followed by a mortification of the intestines, which is evident from stools black, bloody, horribly offensive, and extremely infectious.

Blotches or marks of a bluish colour, and resembling those which are occasioned by violent bruises, are frequently seen in the latter stages of these diseases; and when the extremities are at the same time cold, and change to a livid colour, are certain tokens that the closing scene approaches.

Other unfavourable symptoms, are a change of voice; the eyes wild, staring, and seeming almost ready to start from the head; and a constant inclination to throw off the bed-cloaths, and uncover the breast: when these occur, little hope can be entertained of the patient's recovery. Deafness, at the decline of the disease, is generally esteemed a flattering symptom.

These fevers are often inflammatory in their beginning, but they very shortly become putrid, and in some cases disorders of

a very different nature terminate in putridity by long continuance.

The great objects which ought to engage our attention in the cure of these diseases are, to stop the progress of the putrefaction, and to restore the vital heat, which must have been lessened in a considerable degree before the blood could be reduced to a state of putridity.

Putrid air being one of the causes of these fevers, it will be necessary to change that of the patient's room very frequently, not only by admitting fresh air through the windows, but by opening opposite doors or windows, in such a way as to give a current for the expulsion of that which is foul and vitiated. The linen of the sick should be very frequently changed, care being taken that the clean is very thoroughly aired and dried by the fire; the stools, and even the urine, should be buried in places dug in the ground for the purpose, and by no means thrown into the common privy or necessary-house, the exhalations from whence might infect the air, and render it pestilential: acid vapours and steams of hot vinegar should be conveyed into the sick room, which should also be sprinkled frequently with various acids; slices of the acid and highly-scented fruits, such as oranges, lemons, &c. should be scattered about the room; and the patient should have one of those fruits constantly at hand to smell to: the sick room may also be fumigated with myrrh and other antiputrescent drugs.

Even the diet should be acidulated; the sago, jellies, or gruel should be rendered both palatable and medicinal, by mixtures of Port wine, old hock, or Rhenish, with the juice of lemons or oranges; wine whey and mustard whey, are also very proper drinks; and beef broth, or rather tea, made by boiling very lean meat only a few minutes, may constitute a part of the patient's food.

Diluting liquors, though rendered somewhat more cordial than in acute fevers, are

are extremely useful in these of which we now speak; but the same caution as to taking small quantities at a time, both of these and of food, is more necessary in these diseases than in the others. Clutton's Febrifuge Spirit, or the elixir of vitriol, may also be used to acidulate these liquors by way of change.

Ripe fruits, whether preserved or not, may be eaten without reserve; in particular, raspberries, strawberries, and currants; roasted or boiled apples, or the soft parts of either in wine and water, or water alone.

Bleeding is never to be attempted without the utmost caution, and only in the beginning of the disease; and when a quick strong pulse, sharp heat, great difficulty of breathing, and violent pains of the back and head demand it: but it should be observed, that even in case of these symptoms, and although shiverings and chillness precede the heat, and the oppression on the breast be very considerable, yet a much smaller quantity of blood should be drawn than in an inflammation of the lungs attended with nearly the same symptoms. Nor will the one disease be easily mistaken for the other, if due regard be had to the description we have given of the symptoms attending putrid fevers; and there will be still less danger of this misconception, if the pestilential or spotted fever be common, or the constitution of the air disposed to generate these disorders: and the first blood taken away will generally put the matter past doubt; that of the putrid patient being of a more loose texture, and softer consistence than that which is taken from the sick either in pleurifies or inflammations of the lungs; if, on the contrary, the blood becomes solid and firm after standing, the operation is by no means to be repeated, nor should it take place at all where the disease is apprehended to proceed from contagion, even though the symptoms may run high at first.

But as the attack of almost every in-

fectious fever occasions a sickness at the stomach, and an inclination to vomit; and as the noxious effluvia are swallowed with the spittle; gentle emetics may be extremely proper, not only to wash away these particles of contagion, but to carry off any bilious, acrid, and putrid matter, that may lie upon the stomach, and which by continuing there would grow more and more corrupt, produce various bad symptoms, and serve to augment the original disease. For this purpose, decoction of ipecacuanha, or from one to two grains of emetic tartar, may be given, and worked off with tea of camomile-flowers; the enormous quantity of which usually swallowed, is so far from being necessary, that it sometimes over-loads the stomach to such a degree, that it has not force to reject the load laid on it; so that the more liquid is poured in, the less capable it is of performing it's office, and being too much distended, it may become inactive, and dreadful consequences follow. In all cases, therefore, if the vomiting does not follow drinking a pint or two, endeavour to forward the discharge with your finger or a feather, avoiding that deluge of drink which is too often most preposterously given.

If the vomiting continues after the stomach has been thus washed out, a common saline mixture, with a small quantity of theriaca Andromachi, from one scruple to thirty grains, may be given; which, with a plaster or cataplasm of species aromaticæ and theriaca, applied to the stomach, will in many cases prove effectual.

But though no such nausea, sickness, or disposition to vomit, should indicate the necessity of washing out the stomach, yet the emetic tartar in small quantities may be given, and repeated every third or fourth hour, till it produces vomit or stool, or promotes gentle perspiration.

After the use of this medicine and it's operation, the following draught may be administered every six hours.

Of

Of camphorated julep, one ounce—of tincture of snake-root, one dram—of syrup of saffron, one dram.

Or the following:

Of theriaca Andromachi, thirty grains—of nitre, six grains—of camphorated julep, one ounce. To be taken as the former.

Clysters of milk, water, and salt, are useful to carry off the putrid matter from the intestines; and laxatives of manna, cream of tartar, Glauber's salts, tamarinds, or rhubarb, are necessary to unload the bowels: acrid and strong purgatives are to be avoided; but a stool or two procured by these gentle medicines at any time of the fever, when a nauseous bitter taste in the mouth, sickness at the stomach, putrid or foetid eructations or breaking of wind, or too great costiveness, a swelled belly, rumblings of the entrails, or griping pains, point out the occasion.

After vomiting and a stool or two, very happy changes are frequently observable, even where the patient had laboured under inexpressible anxiety, load and oppression on the stomach and breast, continual sickness, belches, and hiccup: the excessive foulness of the tongue, sickness and load, the loathsome taste in the mouth, and the offensive breath and eructations, shew what condition the stomach is in; and the abominable, stinking, black, and bilious stools, the necessity as well as advantage of a discharge in that way.

From the seventh to the fourteenth day, the efforts of nature to relieve herself by vomit and stools are generally made, and her regular operations should always be assisted; and somewhat larger doses should be given of the same gentle laxatives, which may be repeated as the symptoms and circumstances of the case may require: but care must be taken to support the patient, during the operation of these medicines, with cordial diet, drink, and medicine, if

necessary; and for this purpose either of the last-mentioned juleps may be given as before directed.

Should a violent diarrhoea come on, or an immoderate discharge in that way threaten danger, recourse must be had to proper astringents, such as theriaca Andromachi, diascordium, tincture of roses, or Port wine or claret boiled with cinnamon; but if the case be extremely urgent, a clyster of the following composition.

Take of the white decoction, six ounces—of diascordium, two drams—of theriaca Andromachi, two drams—of tincture of roses, or Japan earth, two drams.

The white decoction is prepared as follows.

Take one ounce of fine and pure chalk, powdered—gum Arabic, two drams—water, one pint and half. Boil to a pint, and strain or pour off fine.

But no small degree of caution is necessary in the use of astringent medicines: the diarrhoea may probably be critical, and in that case the suppression of it may be attended with the most dangerous consequences; and before these medicines are administered, it will be very proper to prepare the way for them by a small dose or two of rhubarb.

And here it may be necessary to remark, that however critical or salutary a diarrhoea may be at the height or in the decline of this disease, yet at the beginning it is generally prejudicial, especially if the discharge is thin, crude, and profuse.

But when, in these diseases, a diarrhoea is accompanied with a moisture of the skin, or a gentle breathing sweat, it is then unquestionably beneficial; for though nature frequently attempts to discharge the putrid matter in malignant fevers by stool and vomit, yet her more constant effort is through the pores of the skin; nor is the event in any

any of these fevers to be judged of, or the recovery of the patient to be expected, till more or less of a sweat has issued: when that happens, if it proves moderate, warm, and is equally diffused over the whole body, such as is commonly called a breathing sweat; if it comes on about the height of the disease, and if the pulse grows more calm before it breaks out, and during it's continuance remains open, soft, and more regular; perspiration, attended with these symptoms, is of the most salutary nature: but if the sweat is profuse, if it is cold and clammy, or partially confined to the head and breast, there is much more reason to fear, than hope, from such an appearance. Profuse sweats at the beginning are frequently succeeded by a shivering; in which case they are extremely pernicious.

But as those sweats are always more favourable which are produced by the efforts of nature, than those which are brought on by art; so they ought never to be driven out too soon, or forced on by violent and heating medicines, cordials, or the like; it is sufficient that they are supported by drinking plentifully of diluting acidulated liquors, and such gentle cordials as may promote, but not occasion perspiration.

Blisters are in some instances necessary, in particular if the spots suddenly disappear, if the sinking pulse shews that the circulation is languid, if the spirits are low, or the patient lethargic; but they are often improperly applied, especially in the beginning, when the fever runs high, and does not require to be stimulated: and wherever several blisters are applied, it is necessary that the patient should drink plentifully of wine-whey, emulsions, and other demulcent or softening diluting liquors, rendered moderately acid; without which, he may suffer as much from the remedy as the disease. Perhaps cataplasms of warm ingredients to the soles of the feet and to the hands may in most cases be substituted for blisters.

The camphorated julep is a medicine

excellently well adapted to putrid malignant fevers, promoting an easy sweat, and bringing on composure of spirits and quiet sleep, when even opiates fail: if, to each dose, a small quantity of theriaca Andromachi, diascordium, or elixir paregoricum be added, it's efficacy in both respects will be considerably advanced.

To prepare the camphorated julep—

Take of camphor, one dram—of double refined sugar, half an ounce—of gum Arabic, two drams. Grind the camphor with a few drops of rectified spirits of wine till it is quite softened, then add the sugar and the gum, previously reduced to a jelly by warm water, and rub all together till the ingredients are well mixed and united; and, lastly, pour in a pint of strong vinegar by slow degrees, continuing to stir till the whole is completely incorporated.

Two or three spoonfuls of this julep may be given as often as the stomach will bear it.

But the most efficacious, and perhaps most successful medicine, remains yet to be mentioned; in putrid, malignant, and spotted fevers, the Peruvian bark hath produced the happiest effects, and administered at proper times, and in due quantities, will not fail to contribute to the cure.

But before this medicine is given, the state of the patient's body should be enquired into; and if it is found to be costive, or if the belly is hard and swelled, a dose of rhubarb, manna, or some such gentle laxative, will be first necessary.

If the patient's stomach will bear the bark in substance, it is a preferable way of giving it; and in that case the following mixture may be administered, one, two, or three table-spoonfuls at a time, according to the strength and condition of the patient, and as it will remain without occasioning sickness.

On two ounces of powdered bark pour a quart of Port wine and water in equal quantities.

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quantities. Shake them well together, and add as much of the elixir of vitriol, or Clutton's Febrifuge Spirit, and syrup of oranges, as will render it agreeable to the palate.—In cold phlegmatic habits, a larger proportion of wine may be necessary.

But as this medicine in substance, or even in decoction, will not with many persons sit easily on the stomach, the mixture which we recommended in nervous fevers will be found perfectly well calculated for this disease; and it will not only tend to strengthen the solids, and prevent the blood from being farther dissolved and corrupted, but also effect these desirable purposes without shutting up the pores of the skin so much as the bark in substance often does: for, as we have before observed, though profuse sweats in these and most other fevers are prejudicial, yet gentle and easy perspiration should rather be encouraged than checked, and particularly at the height and in the decline of the disorder, not only by a plentiful supply of proper diluting liquors, but, as these fevers often run to a tedious length, by cordial and supporting diet and drink, without which the strength of the patient will be exhausted before the arrival of that crisis which might give a favourable turn to the disease.

To answer this purpose, generous *red wine* is a noble, natural, gently astringent cordial, and when acidulated with the juices of Seville oranges or lemons, will prove of the highest service at the height and in the decline of malignant fevers; it may also be warmed with aromatics, such as cinnamon, orange rind, or tincture of red roses, and a few drops of elixir of vitriol may be occasionally added: and Rhenish and French white wines diluted, make a salutary drink in fevers of this kind; to which may be added, as little inferior, sound unadulterated cyder; and even London porter hath been lately recommended with apparent success.

In our chapter on *infection*, we have given suitable directions for the prevention

of these and other contagious diseases. As that of which we now treat is more highly so than any other, the plague excepted, which is itself a species of the same distemper, it may be right to add the following cautions.

We would advise judges, jurymen, and other necessary attendants on courts of justice, to take a light decoction or infusion of the bark pretty frequently, both previous to, and during the continuance of a session, assizes, or other gaol-delivery, and in particular before coming into a court in the morning: acids to smell to on a handkerchief, or an orange or lemon divided, and often applied to the nostrils, will be useful; and an indulgence in rather a larger quantity of wine than usual, is at such times necessary.

If any disagreeable smell should have offended the stomach, and occasion nausea or sickness, dangerous effects may probably be prevented by having immediate recourse to a gentle emetic; which may be repeated, if the first does not remove every disagreeable symptom.

The same cautions may serve for those who are engaged in attending the sick, and who ought never to approach the bed without applying some acid to the nostrils, and even as much as possible to the lips and mouth.

If the situation of the sick will admit of removal, it ought to be to some place as remote as convenience will permit from other habitations. In gaols, and other public buildings of the like kind, a particular part of the building, distant from the rest, should be appropriated to the reception of such as shall be attacked by any disease which has the least appearance of putridity or malignancy. Indeed, all such as fall sick of these diseases, in places immediately under the direction and jurisdiction of the public, may be very easily so kept apart from others, as to prevent in some degree the spreading of infection; and

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a proper regimen with respect to air and cleanliness, may in such cases be enforced without great difficulty.

Not only the chambers of the sick, but the whole house, should be steamed with hot vinegar, sprinkled with other acids, and fumigated with myrrh, lavender, and other aromatic herbs.

After a recovery from a disease of the putrid kind, air, exercise, a mild nourishing diet, and chalybeat waters, are to be advised; at a proper distance, a dose or two of gentle purging physic, and infusions of the bitter herbs with orange-peel, will contribute to restore the patient's health, and prevent the danger of a relapse.

CHAP. VII.

Of Pleurifies.

A Violent pain on either side of the breast, attended with an acute fever, is commonly called a *pleurify*; and that species of this disorder, which is denominated the *true pleurify*, is occasioned by an inflammation of the *pleura*, being the membrane which lines the breast. There are also other complaints of the like kind which affect the intercostal muscles, or those which are placed above and below the ribs, or that membrane which covers the ribs themselves, and these are described as *spurious* or *bastard pleurifies*.

This disorder generally attacks the strong and laborious, such as travel much or are exposed to work in the open air, and such in particular as are vigorous in constitution and of sanguine habits.

The causes are, whatever can excite internal inflammation; and obstructed perspiration is the principal.

Drinking cold liquors after being heated with exercise; exposing the body without cloaths in a sweat; bathing in cold water when in such a state; violent exercise of any kind; a sudden check to any eruptive disease; the stoppage of any accustomed drains or evacuations, whether natural or artificial; suffering the body to be affected with too great a degree of heat or cold; neglect-

ing to purge, bleed, or use alterative medicines, at usual and accustomed stated periods; and even, in some instances, blows or bruises, and other external injuries upon the breast, may occasion pleurify fevers.

To prevent them, the only means is to avoid these causes, and to be cautiously regular in food, drink, exercise, physic, and even cloathing.

The symptoms are, heat, shivering, restlessness, and thirst; and these usual indications of fever are followed in this by an acute pain in the side just above the short ribs, reaching in some cases to the throat, in some to the back, and in others to the shoulders; this pain is accompanied by a difficulty of breathing, watching, nausea, redness, or flushing of the cheeks, phlegm, and a spitting of very yellow and bloody matter; which last is rather a favourable sign, as without it a delirium or lethargic disposition frequently comes on: the pain is increased by drawing the breath, and lessened upon passing the air out of the lungs; if the pain shifts, it is a favourable symptom. The cough which attends this disorder is sometimes short, dry, and extremely painful; at others it is accompanied with a discharge of matter, at first thin, but which afterwards becomes more thick and bloody;

bloody; if the difficulty of breathing increases to such a degree as to check the blood in it's passage through the lungs, suffocation will soon follow. The pulse, in this distemper, is generally quick and hard, and the urine high-coloured; if a mortification takes place, the pain ceases of a sudden, and the pulse as suddenly becomes weak and small, and at the same time continues quick and irregular; and in this case a delirium follows, and convulsions close the scene. A suppuration sometimes proves equally fatal, which is denoted by irregular chillness and shivering, and the pain becoming dull and throbbing; and the matter sometimes points externally, and sometimes is emptied into the cavity of the breast; whence it is in some cases extracted by the operation called *empyema*, which is opening the breast, but is always attended with extreme danger: sometimes the disease continues a fortnight before the matter is formed, but whenever it happens, the patient seldom escapes.

If the fever is violent, the heat intense, the cough dry, and the tongue foul and crusted, a mortification may be expected soon, if a suppuration does not take place: a sudden abatement of the stitch, without any apparent cause, but accompanied with a pale and sad countenance, heavy eyes, and a feeble pulse, are signs that the disorder has affected the patient's brain, and the worst consequences may be dreaded; and this is also the case, when in this disease purple spots appear, which sometimes, though rarely, happens.

The patient's room should be kept rather cool than cold, and the liquid should all be swallowed somewhat warm.

The diet should be extremely light, such as gruels, panada, or fago; the drink, linseed tea, barley-water, common emulsion, pectoral decoction, thin whey, a decoction of barley and red poppies; or a spoonful of linseed unbruised, and half an ounce of liquorice root, infused in a quart of boil-

ing water for a few hours, is also an exceeding good common drink, and wants only an ounce of the leaves of the herb colts-foot to make the pectoral infusion: boiling the same ingredients till one third part is consumed, gives the pectoral decoction.

Any of the foregoing drinks may be acidulated, and rendered more palatable, by a small mixture of the jelly or syrup of black currants; and if the patient wants a stool, the decoction with raisins and figs, as directed in acute or continual fevers, may be given occasionally till it procures one.

Bleeding is indispensibly necessary, previous to any other attempt to relieve; the strength of the patient, pulse, fever, violence of the pain, and difficulty of breathing, must determine the quantity: the quality of the blood should be also nicely inspected; if it is thick, sily, and covered with a strong crust or coat, an inflammatory disposition is indicated, and the patient will bear repeated bleedings. It is adviseable, if the strength of the patient will admit of it, to draw a pretty considerable quantity of blood at once: strong constitutions will well endure the loss of twelve or fourteen ounces, unless the patient should faint, or the pulse alter manifestly in the course of the operation; but if the expectorated matter, or that which is spit up, is already streaked with blood, and appears digested, bleeding must be omitted.

If the symptoms continue violent, and in particular if the pain in the breast or side remains unabated, a repetition of this operation will be necessary, and even a third, or oftener, as circumstances direct, and as from the heavy, sily appearance of the blood, may appear to be requisite; taking care to allow proper intervals, and not to exhaust the patient's strength too suddenly.

Emollient clysters of linseed or mallows, tea, and milk, should immediately succeed bleeding, especially if the body is costive; which not only empty the intestines of hardened

ened excrements and wind, but also draw a greater quantity of blood downwards, and in both respects ease the superior parts: but it is not necessary to promote any very considerable discharge by stool; we should not increase the fever by suffering the body to be costive, nor exhaust the strength, or suppress the spitting, by rendering it too loose.

Fomentations of linseed, camomile flowers, elder flowers, or common mallows, boiled in water, should be applied to the part affected, either by putting the herbs themselves in flannel, and holding them to the side, or by dipping flannel cloths in the decoction, squeezing them moderately dry, and applying them as warm as the patient can bear; and, as these cool, supplying warm ones. Bladders filled with the same decoction, or any other warm liquid, may also be applied to the part, which may likewise be frequently rubbed with æther or opodeldoc; but great care must be taken, that the patient does not get cold in exposing his body to these several operations. These fomentations may also be used to the belly and about the groins, which may take down the too great stricture of the fibres in general, and lessen the impetuosity of the blood.

Blisters may also be applied to the seat of the pain, if the fomentations prove ineffectual to remove it; some advise them also between the shoulders, and others on the legs: if the blister on one side ceases to discharge freely, and the pain continues obstinate, it may be advisable to try another on the other side.

The following plaster hath also been applied to the part after the fomentations, with very good success.

Take of Burgundy pitch, one pound—yellow wax, one ounce—cumin-seeds, carraway-seeds, and bay-berries, of each one ounce. Melt the pitch and wax together, and having reduced the seeds to powder, sprinkle them in, and stir all well together: this is what is commonly called the cumin

plaster. To a quantity of this, sufficient to spread a plaster which may cover the part affected, add one dram of opium, and one scruple of camphire, and rub them well with the former composition.

If warm, emollient, general baths, for the whole body, were easily attainable, they might no doubt be used to considerable advantage in this disease; and wherever an opportunity offers, we would recommend their being tried.

Leaves of different plants, applied warm to the side, are said to have procured relief; those of cabbage or any other of the like size and consistence; and bleeding with leeches on the part, or cupping with scarifications, are also advised.

To promote expectoration, some direct half an ounce of the oxymel or vinegar of squills, to be added to three ounces of the pectoral decoction, and a table-spoonful or two of it to be taken occasionally. Others recommend oil of sweet almonds, syrup of violets, spermaceti, and fugar-candy, in equal quantities, of which an electuary being formed, the patient may take a tea-spoonful frequently, or whenever the cough is particularly troublesome.

The following draught may be used, which will serve to cool the blood and promote gentle perspiration, especially if the skin is hot and dry.

Take of the julep of camphire, one ounce and a half—cinnamon water and pectoral syrup, of each one dram—nitre, ten grains.

These draughts may be repeated every six hours, and when the fever is considerably abated, if a thin defluxion on the lungs is troublesome, a small quantity of elixir paregoricum may be added.

In the beginning of this disease, and after the necessary evacuations, a decoction of Seneka root is said to be almost a specific.

Take of Seneka rattle-snake root, two ounces—water, three quarts. Boil till it is reduced

duced one third, and pour or strain it off fine: dissolve it in two ounces of white sugar candy.

Two or three spoonfuls of this decoction may be taken three or four times a day; if it should occasion sickness or vomiting, the doses may be smaller and more frequent; or a small quantity of simple nutmeg or cinnamon water may be added to each dose.

If the heat and inflammation continue violent after the first bleeding, a cooling purge of manna, rhubarb, senna, or Glauber's salts, is by some recommended, as tending to allay the inflammatory symptoms; but in the administration of purging medicines, it will be necessary to act cautiously, and consult the strength of the patient, and the particular appearance of the symptoms. Terrifying symptoms sometimes appear at the height or crisis of this disease; such as an almost suppressed breath, convulsions, and a fluttering, interrupted pulse; yet though from these appearances a mortification may be apprehended, and melancholy consequences expected, yet sometimes these symptoms turn out to be critical, and an almost immediate cure often follows when the approaches of death are dreaded. On these occasions, should a gangrene really have taken place, the efforts of medicine will be in vain; but should these struggles prove to be the endeavours of Nature to throw off the disease, she will only require to be assisted by diluting liquors, and to be supported, if the patient's strength or spirits should fail, with the addition of a small quantity of wine in whey, negus, or food.

It may be necessary to add an observation or two, which may serve to regulate the treatment of this disease, where, from particular circumstances, it requires variation from the usual methods.

It has been remarked, that the air and weather have a very considerable influence,

both in the causes, and degrees of violence, of these diseases: in very cold, dry seasons, they are found exceedingly common, and even epidemic; and in high, cold situations, much exposed to north-east winds, they are epidemic, and peculiarly prevailing; and in such situations, bleeding is particularly required.

But in low, warm places, near the sea, and in continued wet, moist, or foggy weather, patients in pleuritic cases neither require, nor will bear the loss of much blood; and in such cases this disease is frequently carried off without bleeding, or with taking off only a very moderate quantity of blood.

There are also some complaints of pleuritic appearance, in which the pains in the side are merely symptomatic; such are those which precede eruptive disorders, and attend putrid or malignant fevers: as these pains arise from acrimony, and not from inflammation, they are to be removed by diluting, sweating, and blistering, and not by drawing blood.

The *bastard pleurisy* is an inflammation of the intercostal muscles, or those which pass over and under the ribs: the causes, symptoms, treatment, and cure, are nearly similar to those of the true pleurisy, from whence it is principally distinguished by the pain being more external, and by a perceivable swelling at the seat of it, which is extremely tender to the touch, and prevents the patient from lying on the side affected.

The symptoms are in general less severe; the difficulty of breathing and oppression of the breast not so great; the general inflammation not so violent; the cough without expectoration; and, as the lungs are less apt to be affected, a mortification doth not often take place, and suppuration is attended with but little danger.

For the cure, bleeding must be proportioned to the hardness and strength of the pulse; the nitrous, cooling, and opening medicines may be administered; the fomentations and embrocations with æther and the

the volatile liniment used, and blistering, cupping, and scarifying, or plastering the part, as exigencies may require: the decoction of Seneka may also be taken; and, if a suppuration threatens, it may be encouraged by bladders of warm water and poultices. This disease is of shorter duration than the true pleurisy, seldom continuing above six, seven, or eight days.

There is also another disease which is nearly allied to pleurisy; being excited by the same causes, and marked by symptoms not greatly differing.

This is denominated the *parapneumonia*, or inflammation of the *diaphragm*, which is commonly called the *midriff*, and is that muscular part which separates the breast from the belly.

In this disorder the pain is violent, being seated in the lower part of the breast under the short ribs, and striking from them to the back. The fever is acute, and generally attended with a constant delirium; the belly is drawn up to avoid the motion of the muscles in breathing, which of consequence

is quick, suffocating, and difficult. The patient is often affected with sickness, and sometimes with involuntary laughter, hiccups, convulsions, and even madness; the pulse is quick, irregular, and small: and the pain is not only augmented by drawing the breath, but also by coughing, sneezing, an over full stomach, nausea, and vomiting; as well as by the necessary compression of the belly in voiding excrement or urine, and every motion that tends to disturb those muscles where the disease is seated.

If suppuration happens in this disorder, it is generally fatal: the fomentations and embrocations, together with emollient clysters, are therefore peculiarly useful; as the former may prevent the formation of matter, and the latter not only relaxes the bowels, but draws off the weight and relieves the stricture on the affected part.

After any of the pleuritic diseases are effectually removed, a temperate and light diet, with cleansing liquors, air, and moderate exercise, will assist in confirming the cure.

C H A P. VIII.

Of the Peripneumony, or Inflammation of the Lungs; and of the Pleuro-peripneumony, or Complication of the Pleurisy and Inflammation of the Lungs.

THESE diseases are so common, either as original maladies, or consequent to some other, that they call for very diligent attention, and the nicest observation.

Inflammations on the lungs affect one of the principal organs of life, are frequently attended with the utmost danger, and require very different treatment in their very different stages.

This disorder is divided into three distinct kinds; the *true*, or inflammation in the lungs; the *spurious*, or when a thick

glutinous matter obstructs the vessels of the lungs; and the *catarrhus*, when it is occasioned by a thin, sharp, defluxion on the lungs.

Persons of sanguine habits, and those who live freely, both as to food and liquors, are most liable to these complaints: the conformation of the body, and the previous state of health, also contribute to the violence of the symptoms; in flat-breasted and narrow-chested persons, and such as are asthmatic, they are generally severe.

The causes of the *true peripneumony*, or
inflammation

inflammation of the lungs, may be either in the air; from cold applied to the mouth, stomach, or skin of other parts of the body; violent exercise of the lungs, in running, wrestling, straining the voice, or the like: and generally, whatever tends to excite pleurifies, will also occasion inflammations in the lungs; which, also, frequently accompany or succeed, and are the consequences of pleuritic disorders.

The general symptoms, or those which are common to the several species of this disease, are a load at the breast, a short and difficult breathing, a cough, and more or less of a fever; and these are also symptoms of the pleurisy: but there are some particulars in which the signs are different; the breathing is attended with a kind of snoring noise, the cough is more acute than that which attends a pleurisy, and the air from the lungs is peculiarly hot. Inflammations of the lungs are also attended with a greater degree of restlessness from the very beginning, and the pulse is generally more soft, though frequently quick and intermitting; before bleeding it is sometimes so low as hardly to be felt, but rises and grows more strong after that operation; and the urine is thick and disturbed. If the symptoms are violent at first, the patient will only be able to lie on his back, and that with extreme difficulty, an erect or upright posture affording him most ease, the passage of the blood through the lungs being so obstructed as to threaten suffocation. As the disease advances, the veins in the neck swell; one arm seems dead, and as if affected with the palsy, and the pulse becomes totally irregular; the cheeks, eyelids, and tongue, swell; the eyes grow dull; and, in some instances, especially in hot seasons, the breast and neck are marked with livid blotches: a confused, low delirium succeeds, which is sometimes indicated, in the beginning of the disease, by a vacant air on the countenance, and a wild impetuous stare of the eyes; and if relief is

not obtained, the anguish becomes inexpressible, and the patient dies in a suffocation.

If the pulse is soft, irregular, and small; if the attack is violent, and the symptoms proceed with rapidity; if horror, anxiety, and shiverings, are succeeded by intense heat; if the disease appears to have affected the patient's reason in the early stages of it; if the stools are frequent and thin, and a perpetual inclination to that evacuation offers; if the urine is clear, and without sediment or cloud; if the patient is not kept in his bed without difficulty; and if a great change of countenance is apparent; extreme danger may be apprehended.

But when, on the contrary, an expectoration of bloody matter comes on, in vigorous constitutions, so early as the fourth or fifth day, and spontaneous sweats break forth in a day or two after; when the urine drops a whitish sediment—and when the same events take place in more languid habits from the tenth to the fourteenth day; if the patient's sleep is less disturbed, his pulse more regular and soft, and his strength does not appear to be greatly impaired; flattering hopes may be entertained that the disease will terminate favourably.

The regimen may be nearly the same as that recommended in pleurifies, but rather more thin; and a considerable degree of caution is necessary, as to the admission of fresh air into the patient's room; which, if it be suffered to approach him too suddenly, or in too great a degree, may check the expectoration, and create immediate danger.

The liquors should be cooling, diluting, and relaxing: such as very thin whey; the barley-water, with figs, raisins, and liquorice; tea; infusion or decoction of the pectoral herbs, such as ground-ivy, maiden-hair, hyssop, and colts-foot; and these should be acidulated with juice of lemons or oranges, and may be sweetened with honey. All or any of these liquors, changing

ing them frequently to avoid palling the stomach, may be taken by turns; but they should be drank moderately warm, and in small quantities at a time, rather sipping them continually, than swallowing draughts of them; for by this means much of the resolving relaxing vapour is also drawn into the lungs, and probably much absorbed by their imbibing vessels; so that relaxing and diluting are thus both doubly and effectually carried on: indeed, large draughts should not be taken down at once in any disorder, but particularly in this; for, by overcharging the stomach, they produce wind and indigestion, as hath been before remarked, and in this disease, by forcing up the midriff, render breathing more difficult.

To diluting and cooling liquors must be added (under proper precautions) cooling air; nor can those who suffer the violent paroxysms of this disorder bear motion of body or agitation of mind. Persons labouring under asthmatic complaints are obliged to keep a quiet posture, and to breathe the cool air, or they are in danger of suffocation; and how much more are these indulgences necessary in a disease where there is not only an obstruction in the vessels of the lungs, but an inflammation in their very substance! close, narrow, and stifling rooms, are incommodious to those who are afflicted with any disorder, but much more so to those who suffer under that of which we treat, the most troublesome complaint of which is, the extreme difficulty of breathing; if such close rooms cannot be avoided, they should be frequently, but prudently aired.

The cure depends, in almost every case, on bleeding and promoting expectoration; and though the efforts of nature will sometimes effect it by the latter evacuation only, by some critical hæmorrhage or discharge of blood, or by an inflammation taking place in some other part of the body, yet it would be extremely dangerous to wait till a crisis of either kind shall present itself, as in most cases it may not offer at all, and in others

not till the patient is become too weak to support it, or the disease is too deeply rooted to be removed by either of these means.

Bleeding being absolutely necessary, this operation cannot be performed too early; and it will be right to take a considerable quantity of blood at once from a large orifice: the stronger and more sanguine the habit, the more blood should be drawn, even to twelve, fourteen, or sixteen ounces; yet to stop on the appearance of faintness, cold sweats on the forehead or face, yawning, or other indications of inability to support the loss of a farther quantity. But these symptoms may in general be prevented by bleeding the person as he lies on a bed, which will be extremely proper in cases which depend so much on drawing off considerable quantities of blood. The age and size of the patient should also be consulted in drawing blood; corpulent or fat persons do not in general bear bleeding as well as the lean and muscular; nor are the very young or very old the properest subjects of this evacuation, though it is sometimes necessary to be performed on both.

If the symptoms are not relieved by the first bleeding, more blood should be drawn after eight, ten, or twelve hours, or even sooner, if they become more aggravated; and this must be repeated, if the fever, oppression, anxiety, and difficulty of breathing, increase or continue without abatement, especially if the blood appears firm and of a close and heavy texture, or covered over with a tough, yellowish, coat or buff; which, however, does not always appear till the second or third bleeding, though the symptoms may indicate so high a degree of inflammation as to require these frequent bleedings, and the want of this appearance is owing to the blood flowing from a small orifice, and trickling or oozing down the arm.

This heavy, close, and buffy appearance of the blood, with a strong, full pulse, will warrant the continuing to bleed till the

X x breathing

breathing is become more free and easy; but if the mass is of a loose texture, and not covered with such a fizy coat or buff; if the pulse seems to sink and flutter, or grows more weak and small on bleeding; it is time to desist: more especially when a bluish film appears on the blood, with a soft greenish jelly beneath, and the whole texture is loose and soft, with a muddy, reddish, or green serum; all which are signs that the blood is not in such a state as to admit of large quantities being taken away.

A strong, throbbing, quick pulse, in these disorders, always calls for farther bleeding, at least till some degree of ease in breathing, or the expectoration of promising matter, is obtained. But it frequently happens, that the pulse, even at the beginning of inflammations on the lungs, seems oppressed, irregular, low, and intermitting, the patient at the same time complaining of great languor and weakness, which would seem to contradict any design of letting blood, and yet the load and heat at the breast, anxiety, and difficulty of breathing, demand it; but in these cases it should be considered, that such a sudden falling off of strength, spirits, and pulse, doth not arise from want of blood, as the duration of this disease for a few hours, or even a day or two, cannot be supposed to have exhausted the vital liquid in any considerable degree; the truth is, that the real occasion of these symptoms is an excess, and not a defect of blood, as is evident on bleeding persons in this situation, whose pulse always rises upon the performance of this operation.

Emollient clysters, in each of which one scruple of nitre hath been dissolved, should be frequently administered; and the diluting drinks may be rendered agreeably acid by a quantity of nitre, or of Clutton's Febrifuge Spirit, sufficient for that purpose.

Blisters between the shoulders, and to the sides, may also be applied in cases of emergency; and particularly if the expecto-

tation stops, not giving way to any other evacuation, it may be proper to blister the legs.

The decoction of Seneka rattle-snake root, given as directed in pleurifies, at proper intervals, will be of considerable use.

When the matter begins to expectorate freely, and appears of a yellowish colour, bleeding ceases to be adviseable, and either of the following draughts may be given to promote the spitting; but no medicines of this kind should be administered till nature indicates a disposition to relieve the patient in this way.

Take pure water, one ounce and half—spermaceti dissolved with yolk of egg, half a dram—nitre, one scruple—pectoral syrup, one dram. Make a draught, to be taken every fourth hour.

Or, take pure water, one ounce and half—spermaceti dissolved as above, half a dram—salt of hartshorn, half a scruple—cinnamon water and balsamic syrup, of each one dram. To be taken every sixth hour.

Or the following emulsion:

Of the balsamic syrup, one ounce and half—of gum Arabic powdered, two drams. Mix with the syrup, and add oil of sweet almonds, three ounces—pure water, one ounce and half.

Of this mixture two or three spoonfuls may be taken every fourth, fifth, or sixth hour.

Gum ammoniac is also usually prescribed, to promote expectoration in these cases, in the following draught.

Take of the milk of ammoniac, four ounces—of the balsamic syrup, six drams. Make into two or three draughts, according to circumstances, and administer every fourth, fifth, or sixth hour.

The milk of ammoniac is prepared as follows.

Dissolve

Dissolve half an ounce of the best gum ammoniac in one pound of pennyroyal water.

But some are of opinion, that the emetic tincture, or antimonial wine, in such doses as will just keep up a nausea, are of more extensive efficacy.

Vapours from warm water may be frequently received into the lungs with the breath, by holding the mouth and nostrils over narrow-mouthed vessels filled with it, or with teas of any of the pectoral herbs.

In the administration of oily or gum-mous mixtures, and other expectorants, care must be taken that they do not bring on any considerable degree of purging, which suppresses the expectoration, and endangers the patient's life.

When the matter that is spit up is very thin and acrid, small doses of opiates may be given; but great moderation and caution is necessary in the administration of these medicines.

This disorder sometimes ends in a vomica, or abscess on the lungs; which, in some cases, proceeds rapidly, and destroys the patient by suffocation; and in others more slowly, in the form of a confirmed consumption: in the former case, when the matter falls into the cavity of the breast, it can only be extracted by the operation of the empyema, or incision into the breast, which we have formerly mentioned; and the latter case must be treated according to the directions which we have given under the article of *consumptions*.

The suppuration takes place frequently after the removal of the inflammatory symptoms, and may be suspected, if the pulse continues quick, though soft; if the cough and difficulty of breathing remain after the pain has in a great measure ceased; if the patient feels slight shiverings succeeded by heats; if his flesh wastes, and his strength rather lessens than returns; and if he feels a disability to lie on the contrary side to that which is affected.

The *peripneumonia notha*, or *bastard peripneumony*, differs considerably from the true peripneumony, or inflammation on the lungs, in the symptoms and appearances, and attacks very different constitutions.

The true peripneumony generally seizes the robust, vigorous, and active; and is most frequent in cold, dry weather, and during the reign of continued north east winds: but bastard peripneumonies attack the old and phlegmatic, the weak and relaxed, the fat and the unwieldy, and prevail most in the winter season, and in wet, moist, and foggy weather; those who are subject to coughs, or who drink largely of spirituous liquors, are peculiarly liable to this disorder.

The bastard peripneumony may be occasioned by the weather and disposition of the air; by a putrid tendency in the juices; by the stoppage of any usual discharge, such as perpetual blister, issue, seton, or old ulcer; or by a weakened state of the lungs, from a tumor formed there: but the more immediate cause is, a pituitous or glutinous matter which obstructs the vessels of the lungs.

The symptoms of this disease are by no means so immediately violent as those of the true peripneumony or actual inflammation of the lungs; it creeps on so slowly, and almost imperceptibly, as frequently to surprize the patient with danger before he has felt himself much indisposed. It begins with a slight weariness, or rather indolence, and proceeds with weakness, loss of strength, depression of spirits, short and heavily drawn breath, and a pain, or rather a load and oppression of the breast; yet though these complaints prove that the lungs are affected in a considerable degree, the fever and heat are so trifling, as to be hardly sufficient to convince the patient of his disorder: some slight shiverings and alternate heats afterwards come on, with quickness and irregularity of pulse; which, notwithstanding, is low, and the difficulty of

of breathing increasing to a degree of violence, and the weakness becoming universal and insupportable, death ensues, when so fatal an event is not even apprehended. In some cases, however, the cough is extremely troublesome; the patient complains of giddiness, or an acute pain in the head; vomits up all liquids, sometimes with the cough and sometimes without; his tongue grows foul; the urine pale-coloured and of a disturbed appearance; the blood taken away resembles that which is drawn in pleurifies; the pain of the head is inexpressibly great on any attempt to cough; the whole breast is disordered; a wheezing is observed to attend the fits of coughing; the eyes are inflamed, and the cheeks red and flushed.

The regimen must be such as is directed in the true peripneumony, the diet extremely light, and the drinks diluting and cleansing; infusions of the pectoral herbs, hyssop, pennyroyal, or ground-ivy, with liquorice-root, mustard whey sharpened with lemon juice, or a decoction of madder roots, may be used as common drinks: any of these drinks may be sweetened with honey; but the same dilution is not necessary as in the true peripneumony, nor doth nature call for it by any great degree of thirst.

This kind of disease ought to be treated with the more circumspection, because the mildness of the symptoms is apt to deceive the patient and those about him: it is not unfrequently taken for a fit of hypochondriacism, but a few hours shew the fatal misapprehension; and an unremitting oppression on the breast, lethargic sleepiness, dark lead-coloured nails and visage, and cold extremities, point out immediate and too often unavoidable danger.

Bleeding, in this disease, must be practised with extreme caution; when common feverish symptoms appear, it may be necessary in a small quantity; some, indeed, recommend in most cases to begin the cure with a bleeding proportioned to the symptoms, though rather small, but it does not

seem adviseable to repeat the operation; and it is particularly necessary in this case, that the patient should be bled as he lies down, to avoid the danger of fainting, which might be prejudicial where the strength and spirits suffer so considerably.

Blisters should be applied between the shoulders; and, as circumstances require, to the sides, arms, and even the legs: should the latter be found necessary, it will be right, as the limbs are apt in this disorder to become coldish and insensible, to rub them well with a flesh-brush, or the hand, before the blistering plasters are applied, and afterwards to wrap them up in flannels, which will very much promote the rising of the blisters, and of consequence the discharge.

Softening, dissolving, and stimulating expectorants, such as we have prescribed in the former part of this chapter, will be useful; to these may be added emetics, of the emetic or antimonial wine, in small quantities, just sufficient to excite a nausea, and promote the discharge of the diseased matter from the lungs.

Purges are also recommended, but they should be of the mildest kind, as violent ones are apt to occasion faintness, cold sweats, and other weakening symptoms; in case this should happen, the patient should be supported with weak broths, or other nourishing food.

But if the matter is already concocted, and the patient spits copiously, neither bleeding or purging are necessary. Mild clysters, and such gentle opening medicines as tend only to cleanse the intestines, such as manna, rhubarb, or the like, and those sparingly administered, will be sufficient: the expectoration may be promoted by any of the diluting liquors which we have mentioned, and the patient may be supported by the addition of a little white-wine.

Saline draughts of the following composition will also be proper.

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Pure water, three ounces—salt of hartshorn, one scruple—lemon juice, six drams (or in want of lemon juice, distilled vinegar, four drams) balsamic syrup, and alexiterial water, of each half an ounce. Make two draughts, one to be taken at the distance of six hours from the other, and to be repeated as occasion may require. Simple waters of mint, or other herbs, may supply the place of the alexiterial water.

A pectoral draught may also be used.

Take of the milk of gum ammoniac, one ounce and half—spermaceæ dissolved with yolk of egg, one scruple—salt of hartshorn, half a scruple—cinnamon water, two drams—balsamic syrup, one dram.

To be taken as directed for the last prescription.

However violent the cough may be, opiates must be used with great caution and discretion, and by no means until the expectoration is easy: when the decoction of Seneka root may also be serviceable.

The powder of Benzoin, or gum Benjamin, has also been recommended to be strewed on hot coals or a heated iron, and the fumes drawn into the lungs with the breath.

After the disease is removed, the decoction of Peruvian bark will contribute to restore the patient's strength; and change of air, gentle exercise, and asses milk, will assist to confirm his health.

The *catarrhus peripneumony* is distinguished from the last mentioned disorders, by the cough being more frequent and violent, occasioned by a defluxion of thin and acrid matter on the lungs: in this case opiates may be used rather more freely after the expectoration has been promoted, as before directed; and storax pills are recommended to quiet the cough, in such doses as circumstances may point out.

The regimen, as to diet and liquors, and the treatment, may be generally such as is directed in the other species of the peripneumony.

The *pleuro-peripneumony* is a complication of two diseases: the *pleurisy*, or *inflammation of the pleura*; and the *peripneumony*, or *inflammation of the lungs*.

If the descriptions which we have already given of both these diseases be attended to, there will be no difficulty in discovering the case of the unfortunate patient, in which the symptoms of each of those disorders unite. It may be proper to remind our readers, that the principal apparent difference between the symptoms of the pleurisy and peripneumony is, that in the latter the pulse is generally less strong and violent, and the difficulty of breathing, and all the complaints of weight, oppression, and pains at the breast, are in most instances more troublesome.

Hence it will appear, that, happily for the patient, the method of cure which is applicable to one disorder, will not (as in many other unhappy circumstances of complicated diseases) prove prejudicial to the other; and, perhaps, the only variation in treatment ought to arise from a very particular attention to the pulse, which will regulate the bleeding so as not to exhaust the strength of the sick in too great a degree, or to repeat it after the disease has made a certain progress.

In the pleuro-peripneumony it may also be observed, that the pains often continue, more or less, a considerable time after the fever is quite gone off; and in these cases relief is not to be sought from repeated bleedings, but from a free and copious expectoration, without which it very seldom ends well; and the more early this discharge, which may be considered as the natural crisis of this disorder, is brought on, the better. At the beginning, the expectorated matter is generally crude and thin, but soon becomes of a yellowish white, and better consistence; and when matters proceed rightly, it is commonly streaked with blood about the third day, or the blood is at that time so incorporated

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with

with it as to give it a bloody tinge; and this kind of matter, when freely thrown off, gives great relief to the respiration, pain, and oppression of the breast, and frequently terminates the disease in seven or eight days.

As both the disorders which unite to compose this of which we now speak are inflammatory, it will not be necessary to repeat, that a light and reasonably cooling diet, and a moderate quantity of mild, softening, diluting liquors, are essentially useful; or that pectoral and (according to the symptoms) nitrous draughts, and medicines which promote expectoration, are adviseable in the different stages of the pleuro-peripneumony.

But if an inflammation of the lungs is in itself a disorder attended in all cases with danger, and the pleurisy is always a

painful, and often a very obstinate disease, the union of these two maladies must unquestionably occasion accumulated doubt and difficulty, and require the utmost caution and circumspection, not only in the treatment of the disease while it exists, but in the subsequent care and conduct of the patient in his recovery; for he will be found peculiarly liable to fall back, and relapses in these cases are frequently of worse consequence than the original attack.

The precautions to be particularly enforced, are to avoid taking cold, or heating the body by any extraordinary motion, or the blood by any kind of excess; to go much, but guardedly into the air; to use constant, but gentle exercise; and nourishing, but light, mild, and easily digested food.

CHAP. IX.

Of the Miliary Fever.

THIS is a fever of the eruptive kind, and takes it's name from the small pustules or bladders which appear in the skin, and are thought to resemble in some measure the millet-seed: these pustules are at first full of a clear whey-like matter, but afterwards this serum becomes whitish or pearl-coloured, sometimes they are all reddish, and at others red and white mixed.

The causes of this disease are generally described to be such as occasion nervous fevers; want of sleep; violent, or suppressed evacuations; bad, poor, and unwholesome provision; foul, stinking, or stagnate water; unripe fruits, or too great quantities of such as are cold and windy; and a moist, heavy air. To these may be added, want of exercise, intense application of the mind, and excess of the passions;

and the more immediate cause seems to be, an acid acrimony in the blood.

Those are most liable to this disorder, who are of a phlegmatic, or a weakly and relaxed habit of body; the laborious, active, and middle-aged, are seldom subject to it. Women are more often attacked by it than men, those of delicate constitutions, and who lead sedentary lives; and women who are great with child, and in general unable and unwilling to use much exercise: and it is on this account that they are frequently seized with this disease in child-bed; but it is not, as has been generally supposed, peculiar to that situation; the same causes would produce the same effect, if the patient was not in that particular condition.

The *miliary fever* is sometimes an original disease, but at others is only symptomatic;

tomatic; and, in that way, frequently attendant on the continued, malignant, and nervous fever, as well as on other eruptive diseases, such as the measles and small-pox, especially when the medicines or regimen have been too heating.

The preceding symptoms of this fever are a languor of body, and imbecility or weakness of mind, which disposes it to be disturbed by the impressions of anger, grief, fear, or the like; and in some cases, it may be immediately the effect of some long and painful antecedent disorder.

Pains about the back, loins, belly, and sides, are the first approaching symptoms; and those pains resemble cholic, gravel, or rheumatism; and in women, even those of labour. On the abatement of those pains, slight shiverings and flushes, or rather alternate cold and heat, affect the whole body, and the heat is particularly intense in the palms of the hands; the pulse is low and weak, but generally quick; the spirits depressed; an oppression and great weight on the breast, with restlessness, anxiety, and difficulty of drawing breath; sleepless days and nights, without pain in the head, or delirium; pale-coloured urine, and sometimes a white crust on the tongue, but at others it appears as in health. These symptoms may be considered as signs that the eruptions are about to appear, and they continue, (when the disease is not violent) as we have described, till the pustules rise, after which they commonly abate considerably, or disappear: but in the worst degrees of this disorder they are greatly aggravated; excessive pains in the stomach are complained of, after attempts to sleep; a tremor seizes all the limbs, and especially the hands; in child-bed women, the milk is checked and leaves the breast, and other evacuations are obstructed.

The paroxysms of this fever return like the fits of an intermittent, being violent and more moderate by intervals; in the last stages of it, delirium, an augmented and

almost insupportable difficulty of breathing, and convulsions, accompany all the other symptoms, which are proportionably increased in violence.

The appearance of the eruption is not fixed to any certain period of the disease; in some cases it is so early as the fourth, and in others even later than the eleventh or twelfth days, but the urgency of the symptoms generally foretels its approach.

Immediately preceding the coming out of the pustules, an itching, tingling, or pricking, is generally felt in the skin, and the profuse sweat with which this sensation is commonly accompanied, produces a fourish and disagreeable smell; these pustules in most cases are only found on the neck, breast, and between the fingers, though in others they are spread over the whole body; they continue on the skin till they are increased to their full size, and then disappear gradually, leaving the external skin somewhat rough on the parts where they were most abundant: of these pustules, the red are less dangerous than the white.

In the beginning of this disease, heating medicines, or a warm regimen, will be attended with danger, if they do not produce perspiration, which is less often effected by these means than by diluting. The favourable appearances are, a pain in any particular part in the early stages of the disorder; heat without much sense of pain; heats and colds returning alternately; a deficiency of spirits; a weight on the breast; difficult breathing, accompanied with frequent sighs; and the abatement of these complaints on the appearance of the pustules, with a gentle continued perspiration; much inclination to sleep is also flattering. Delirium, and even convulsions, before the eruption, are not always attended with great danger; but in the progress or declension of the disease, these violent symptoms are alarming: if a diarrhoea comes on, and either stops spontaneously of a sudden, or is checked by medicine, an apoplexy may be apprehended.

apprehended. A change of the urine from a yellow to a pale colour at once, threatens danger; and it may also be feared when the pustules appear and vanish at different times.

In the decline of this disease, the wrists and upper surfaces of the hands are often cold, moist, and clammy; and upon the abatement of the eruption, the legs, thighs, and feet swell, a tumour or abscess forms on the breast, the memory fails, and an immoderate quantity of urine is discharged: if the patient is a woman in child-bed, the discharges are excessive; loss of appetite, weakness, heat of the internal parts, and hysteric appearances succeed, and when these symptoms happen, a fatal hectic does not unfrequently follow.

In all eruptive diseases, the great object is to keep up such a degree of heat as to prevent the pustules from being checked or driven back, and to promote their arriving to maturity, but at the same time not to increase it so much as to force out a large quantity.

The chamber of the sick therefore should be kept to that degree of warmth only, which the patient finds perfectly agreeable; for this purpose fresh air may be admitted with care, but not in such a quantity as to excite any disagreeable sensations; the bed should not be covered with more cloaths than usual in health, and no ideas of danger should be thrown out to disturb or alarm the patient's mind: any agitation of the spirits tends to retard the appearance, or check the progress of the eruption, either of which will be productive of very dangerous consequences.

The diet may be panada, gruel, sago, and weak broths; small quantities of wine and sugar may be added to the former; but this must be regulated by the symptoms, and omitted if they are very inflammatory. Fruits, roasted apples, and the cooling and cleansing food allowed in other fevers, may be used in this.

The drink must also be suited to the symptoms, and to the patient's strength and degree of spirits; if neither fail, the herb teas, Seltzer water, or the following decoction may be used.

Take one ounce of sarsaparilla—one ounce of hartshorn shavings. Boil them twenty minutes in one quart of water; strain it off, and sweeten with sugar or honey.

If the patient should be weak or low, and his spirits sink, his drink must be of a more generous nature, such as wine whey, or negus, acidulated with orange or lemon-juice: the quantity of wine must be determined by the circumstances.

Bleeding is rarely either necessary or admissible in this disease, as the feverish symptoms seldom run high, but it must in no case be performed after the appearance of the pustules; and should such symptoms attend as to render it advisable, it should even then be done with great deliberation. The following draughts may also be necessary.

Syrup of lemon, one ounce—salt of hartshorn, a scruple—antimonial wine, from forty to fifty drops—pure water, two ounces—balsamic syrup, half an ounce.—Of this quantity make two draughts; give them at the distance of four or five hours, and repeat as needful.

Blisters are particularly recommended in this disease, and where the eruption disappears and returns, are peculiarly necessary; but they should neither be large, nor several at a time; they are best applied to succeed each other, so as to keep up a continual stimulation. If, however, the pustules should totally disappear, and this symptom be attended with considerable pain in the head, delirium, or a lethargic disposition, a larger blister should be applied between the shoulders, and others to the arms, insides of the legs, and thighs.

Though this disease is sometimes brought on,

on, and especially to women in child-bed, by too great a degree of heat in the regimen, and even medicine; by giving too plentifully of wine, spices, and other cordials; and by excluding the air, and loading on an enormous weight of bed-cloaths: yet the cure of it must not be attempted by an immediate alteration to the opposite extreme; the change must be made by degrees, or we shall incur dangers at least equal to those we seek to avoid.

Nor can we in this disease advise extraordinary evacuations, either of purging or sweating; the former tends to waste the patient's strength, and lower his spirits; the latter to throw out an unnecessary quantity of eruption, and delay the progress of the distemper: in this, as well as most other disorders, the efforts of nature should be attentively watched, and moderately promoted; a very costive disposition may be relieved by emollient clysters, and a gentle perspiration aided by diluting liquors; and, in the ordinary progress of the milliary fever, little farther will be necessary.

Yet there are cases in which, on the failure of a kindly progress in the eruption, or of the patient's spirits, cordials may be absolutely necessary; the best, however, which can be recommended, will be wine added in a somewhat larger proportion to the food or liquors, and this may also be better adapted to the necessities of the case than any medical prescriptions we can offer: the latter must be directed and admi-

nistered by some certain rule, but the quantity of the former may be varied according as the occasions present themselves.

The milliary fever is sometimes observed to combine with it symptoms of a putrid nature; and instances have occurred, where spots and blotches have appeared mixed with the eruptions; whenever this happens, wine and the Peruvian bark are the remedies to be applied to, care being taken to ease any complaints in the head, by the use of emollient clysters to keep the body moderately open.

As the progress of this disease is slow, so is the recovery from it equally tedious, and it frequently leaves behind it so considerable a degree of weakness, as to threaten consumptions; in these cases change of air is so necessary, that we have known patients even removed from the country to a town with manifest advantage; but this is not the alteration we would advise: where convenience permits, the change should be from a high to a lower, or from a low to an elevated situation; avoiding in the one case fogs and damps, and in the other a cold, bleak, or sharp exposure.

To the article of air should be added, as in most other eruptive diseases, moderate purging, always remembering to proportion this evacuation to the progress of the patient's recovery; which will also be facilitated by gentle exercise and nourishing food, taken often and in moderate quantities at a time.

CHAP. X.

Of the Bilious or Remitting Fever.

THIS fever is also known by several other names, such as the *remittent fever*, the *marsh fever*, the *camp fever*, and the *autumnal remitting fever*; and takes it's

more common additions from a remission of the symptoms which generally happens at different periods of the disease, and from the patient's frequently throwing up a quan-

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tity of bilious matter, a redundancy of which is generally assigned as the cause of this fever.

But *remitting* or *bilious fevers* may be also ascribed to air, seasons, situations, and other local as well as accidental circumstances; for, in this country, it mostly prevails in hot weather, and in low, marshy situations; and chiefly attacks such persons, of tender constitutions and relaxed habits, as are obliged to expose themselves to the damp air of the night; which being peculiarly the case with soldiers in the field, it has from thence been denominated the *camp fever*. Corpulent, fat, and flabby persons, are also subject to it, as well as the indolent, dirty, and those who are confined from air.

The first symptoms of this disease resemble those of other ardent fevers; weakness; weariness; weight, pain, and giddiness of the head; pains in the loins and limbs, shiverings, and tremblings: to these are added an extraordinary degree of inquietude and anguish, burning heats, heart-burns, nausea, purging or vomiting, or both; and in either of those evacuations, a considerable discharge of bile. Excessive thirst is also a symptom of this disorder; the spirits are remarkably dejected, the pulse small but quick, the countenance has a pale or yellowish cast, the skin is generally dry, and the breathing somewhat difficult.

Towards the seventh, eighth, or ninth day, but very uncertainly as to time, the symptoms abate of their violence, and the pulse returns to very nearly it's natural state; but this remission, which is generally brought on by gentle voluntary perspiration, seldom lasts longer than a few hours, when the fever and all the complaints which accompanied it recur, and frequently with increased strength.

As the disease gains ground, the remissions are of shorter duration, and the patient derives very little relief from them;

but one paroxysm follows the other closely, each succeeding one more aggravated than the former: the tongue becomes dry, stiff, and even chopped; the mouth and teeth are covered with a dark crust or coat, of a colour almost approaching to black; an inflammation takes place in the bowels; the stools are discharged involuntarily, and are peculiarly offensive; the pulse becomes irregular; the whole body is covered with a cold and clammy sweat; and twitchings of the hands foretel the approach of convulsions, the last fatal symptom.

The only method of avoiding this fever, is to pay a considerable degree of attention to the several articles of air, exercise, and diet; and the use of the bark as a preventive medicine, in camps and other situations in which an exposure to the damps and chills of night-air are unavoidable, would certainly be productive of very happy consequences.

In this disease the regimen must in a great measure depend on the symptoms, which differ considerably, not only in different patients, but in the same patients in different attacks. If much inflammation is apprehended, it will be right to dilute and to regulate the diet accordingly: when the state of the pulse and the patient's spirits denote a nervous or putrid disposition, both the food and liquors must be proportionally more nourishing and cordial; but as this disease is unquestionably of the ardent kind, the use of heating liquors or medicines may be attended with the danger of converting it into an acute or burning fever, instead of an intermittent, which last is the change we should always endeavour to effect.

But, which ever of the symptoms predominate, the directions we have given in treating of other fevers, will for the most part be applicable to this; nor should we neglect to admit fresh air into the bed-chamber of the sick; to purify it with the steams of hot acids, and by sprinkling

ling it with cold; to fumigate with myrrh, lavender flowers, and other aromatics; to change the linen both of the bed and the body; to remove the foul linen as well as the evacuations, without suffering either to remain in the room a moment; and to supply the patient with some refreshing fruit or essence to apply to his nose, whenever he complains either of giddiness, faintness, or disagreeable smells.

If the pulse should be hard or full at the beginning of this disease, bleeding may be necessary; and if the signs of inflammation are evident, it may be very proper to begin the cure by this evacuation, which may probably produce the desired effect of bringing it to intermit: but should the symptoms be at all nervous, or indicate putridity, bleeding should undoubtedly be omitted.

But a gentle emetic will in no case be prejudicial; and for this purpose, from one to two grains of emetic tartar, or from fifteen to twenty-five grains of ipecacuanha will be found sufficient, and either may be worked off with a moderate quantity of camomile tea.

Costiveness must be prevented by gentle clysters, or very mild opening medicines, such as manna, fenna, the pulp of tamarinds, or the like; some recommend the following powder.

Tartar emetic, one grain—contrayerva root powdered, five grains, mixed.

To be repeated every two hours till it occasions vomiting, purging, and sweating.

But the *Columbo root* hath by others been said to produce the most speedy and beneficial effects; and, when mingled with the neutral salts, supports the patient's strength, and obviates the nausea and sickness; whilst the salts abate the feverish heat, allay the thirst, and bring on a gentle, salutary diarrhoea: and this medicine is by some preferred in this disease to the Peruvian

bark, and may certainly be tried, when that medicine fails of success, which sometimes happens, even though the remissions are extremely evident, and the returns marked with shiverings and other intermitting symptoms; in such cases the *Columbo root* will frequently answer our wishes by correcting the bile, and restoring the tones of the stomach and of the whole habit; and it is also said to be excellent in preventing relapses, which in this fever are frequent, and often more dangerous than the original disease.

The following form of administering the *Columbo root* hath been advised.

Take of the *Columbo root* powdered, sixteen grains—of tartar vitriolat. or vitriolated tartar, twenty-five grains. Mix them well together.

And repeat this dose every four, five, or six hours, according to circumstances.

But whatever success may have attended the use of the *Columbo root*, we are not inclined to prefer it to the Peruvian bark, which we would recommend to be taken immediately after the first remission hath ascertained the nature of the disorder, and after the necessary evacuations of bleeding, (if requisite) vomiting, and stools.

If the bark can be taken in substance, it is certainly the most efficacious method of administering it, and in this case an ounce of the powder may be divided into twelve doses, and one taken every third, fourth, fifth, or sixth hour, as the patient's stomach will bear it, either in water or Port wine and water, according to the state of the fever.

But where the bark in substance is disagreeable, the following forms may answer the purpose: the first, in case no symptoms of inflammation remain; the last, if such symptoms still continue.

Infuse one ounce of Peruvian bark, powdered, in a pint of Rhenish wine. Let it stand twelve

twelve hours, then pour it off fine, and give three or four spoonfuls every hour.

Of the decoction of the bark, one ounce and half—of simple syrup, two drams. To be repeated every hour, or every second hour.

Either of these may be acidulated to the palate with elixir of vitriol; and if the bark should occasion vomiting or purging,

a few drops of the Thebaic tincture, or liquid laudanum, may be added to each dose.

Though this course, as we have before remarked, is not always successful, yet the contrary so seldom happens, that we may venture to pronounce the bark a specific as well in remitting as in intermitting fevers; in which, indeed, the former generally terminate.

CHAP. XI.

Of the Scarlet Fever.

THIS disorder takes its name from a florid efflorescence which appears on the whole surface of the body, and is commonly of a scarlet colour, or rather purple, inclining to that of Port wine or claret.

The ordinary symptoms of this disease resemble those of other fevers; languor, restlessness, pains in the head and limbs, and alternate fits of shivering and heat, so that it is difficult to fix the nature of the fever till the appearance of the spots, which generally takes place about the third day, at first scattered over the different parts of the body, but soon spreading so as in many cases to unite, and nearly cover the whole skin: these spots are accompanied with an itching, heat, and dryness, and after having continued two or three days, disappear; after which the outward or scarf skin peels off, leaving the body covered with a roughness or scale like bran.

In this state of the disease, unaccompanied with symptoms of violence, the assistance of medicine is rarely required: confinement within doors, abstinence from flesh and strong drinks; and the free use of diluting liquors; keeping the body open by emollient clysters, or small doses of cooling laxatives, such as nitre, rhubarb, manna,

or the like; will in most instances remove this disorder, or conduct the patient through it, without his suffering much inconvenience.

But this fever sometimes assumes a malignant and putrid appearance, and its attacks then commence with more violence; and, added to the common symptoms, violent pains in the head, sickness at the stomach, and uncommon oppression of the spirits, are succeeded by great heat, nausea, vomiting, and sore throat; a small but quick pulse; a short and laborious breathing; the tonsils or glands at the entrance of the throat inflamed and ulcerated, and in some cases swelled, but not considerably; the tongue white and foul, but not dry; nor is the skin totally destitute of moisture: in this state the patient continues till about the third day, when the eruption appears, but seldom produces any change in his favour; he languishes under these accumulated complaints till the fifth or sixth, when a suffocation generally puts a period to his misery.

Of the *scarlet fever*, accompanied with these alarming symptoms, the treatment is difficult, and requires the exercise of judgment, discretion, and caution; the signs of inflam-

inflammation may be so apparent as to call for immediate bleeding, yet that operation, in this disease, is in most cases attended with danger; and, if absolutely necessary to be performed, should be done by the scarificator and cupping glasses, but it should in very few instances be repeated.

Nor will this disease bear the promotion of stools by antimonials, so successfully given in most other fevers; in this they are apt to bring on a diarrhoea, the continuance of which may be extremely dangerous, and a sudden check of it no less so; and though it behoves us to keep open the body by emollient clysters, if any tendency to costiveness appears, yet we must avoid medicines which may bring on a discharge that we may find it difficult and perilous to stop.

When the scarlet fever assumes a putrid

and malignant appearance, it must be treated as a putrid fever; the bark must be freely administered with snake-root and other antiputrescents, and the patient must be supported with generous and cordial wines, as directed in that case; under such circumstances, evacuations and a cooling regimen will most probably be fatal.

In some few instances, and those principally among young subjects, this disease commences with fits of convulsion or epilepsy, leaving a kind of heaviness and insensibility; when this happens, it will be adviseable to bathe the extremities in warm water, and to apply a blister between the shoulders; if the convulsive spasms should be violent, gentle opiates may be necessary, such as diacodion, or theriaca Andromachi.

CHAP. XII.

Of the Phrenitis, Phrenzy Fever, or Inflammation of the Brain.

THOUGH, as an original disease, this fever is *not often* met with in temperate climates, yet as it *sometimes* occurs in this, and as it requires the same treatment when it is symptomatic of some other disorder, we shall proceed to speak of it among the fevers which though not most common, yet occasionally present themselves in this country.

The causes of this disease are, a too great flow of blood, occasioned by an increased action of the vessels, and this may arise from excess in drinking wine or spirituous liquors; from violent passions of grief, joy, or anger; from exposing the body, and particularly the head, uncovered to the sun; by sleeping under the immediate influence of that planet in hot weather; by intense application to study; by suddenly stooping,

and by that means forcing the blood up to the head; by breaking in too much upon the hours allotted to sleep; by repelling eruptions in certain diseases; by a suppression of evacuations, whether natural or extraordinary; and by an inflammatory disposition at the beginning of a fever.

The signs which threaten approaching phrenzy, are intense and continued wakefulness, or total inability to sleep; broken, interrupted, and disturbed slumbers, attended with startings and dreams of horror; loss of memory as to things immediately said or done; a sharpness and vehemence of expression in answering questions; violent pains in the head; inflammation of the eyes, which become fixed and red, with tears flowing from them involuntarily; the face is violently flushed, and the patient is

costive; the evacuation of his urine suppressed in a considerable degree; and his skin is dry, parched, and stretched.

As the disease itself appears, it is accompanied with an acute fever; a pulse so low as to be hardly perceptible; the patient's face blown up and full; if he sleeps at all his sleep is of short continuance, and so disturbed that he seems in perpetual agitation; drops of blood fall from his nostrils; and he is seized with madness, which exhibits itself in a variety of ways: at one time the patient weeps in silence, and mourns over some conceived injury, or laments some heavy misfortune; at others he bursts into turbulent and outrageous phrenzy; he is angry without offence, and almost instantly calm and chearful without any apparent reason; he is solicitous of the most minute trifles, and anxiously demands answers to the most frivolous questions; he never continues a minute in the same posture, is perpetually throwing his arms about him, and his head is in unceasing motion; but he complains of no pains in his head, and his joints, though rather cold, are not affected with any tremor; his urine is discharged plentifully, though but little at a time, and is of a yellowish colour, watery, thin, and without sediment; if a head-ach should come on, it is attended by noises, ringing in the ears, and a violent throbbing or beating of the arteries, and particularly those in the temples and neck.

The look of patients in this miserable disease, is fixed, sullen, and wild; their eyes are frequently winking, and their minds seem to labour under very particular impressions; which are, however, in general, occasioned by very unimportant objects.

Though the tongue is black, and the mouth and lips seem dry and parched, yet these appearances are unaccompanied with thirst; on the contrary, drink is frequently refused.

The unfavourable signs in this disease are a constant spitting; green vomiting;

repeated shiverings; pale, watery, crude urine, and convulsions; and when these are attended by a trembling, startings and twitchings of the tendons, want of sleep, retention of urine, and a gnashing or grinding of the teeth, it generally proves fatal.

But if the patient should fall into a free perspiration; if he should have a copious discharge of blood either from his nostrils, or from the hæmorrhoidal vessels, (the seat of the piles;) if a purging should come on, with pains in the breast, or any lower parts of the body; free respiration, with a strong cough, and a plentiful discharge of urine dropping a considerable sediment; expectations may be formed of a propitious event.

In female patients, nature sometimes works relief in an excess of the periodical discharges, added to other favourable symptoms.

The great object of our care, in our endeavours to remove this dreadful disease, is to prevent the immoderate flow of blood into the head, and by that means to lessen the inflammation of the meninges, or membranes of the brain.

In the management of patients afflicted with this disorder, it will be necessary to guard against every thing that may add to the disturbance of the mind, and the agitation of the spirits; no visitors should be admitted, but a very particular friend who is intimately acquainted with the dispositions and inclinations of the patient when in health; such a companion may soothe his anguish, and help to calm his perturbation. If the light is offensive, it should be excluded; but should darkness be found to increase his silent melancholy, the light should be re-admitted; of the two, the paroxysms of rage are less dangerous than gloomy despondency.

A variety of experiments have been suggested to compose this phrenzy of the soul; artificial falls of water have been created, the efforts of music have been tried, the rustling

rustling of the breeze has been imitated, and invention racked with laudable ingenuity to procure the blessing of sleep, by the production of some natural, uniform, and continued sound.

To every effort of this sort should be added the most unwearied attention to every wish of the patient, though expressed by the most distant hints, or betrayed by actions of which we can with difficulty understand the tendency.

Above all things, his desires should be gratified with instant assiduity, and where the absurdity of them renders a compliance improper, or the means of obtaining what he requires are not within our reach, promises and assurances must supply the want of gratification, and he must not be left to entertain a shadow of suspicion that his wishes will remain unsatisfied; indeed, a moderate indulgence in things not altogether proper may be much more prudent, than to let a patient in this situation languish after what his appetite seems to crave.

The regimen as to food and liquors must be nearly the same as in ardent or continued fevers, and must consist of light spoon-meats and fruits; and cool and diluting drinks moderately acidulated; but neither the appetite to eat, or the inclination to swallow liquids, will be very considerable during the more violent progress of this disease.

As the inflammation requires the most speedy abatement, the means to effect it must be powerful, and used without delay. Bleeding from a large orifice, and as plentifully as the strength of the patient will admit, must be the first effort; and it has been advised to perform the operation as the patient stands on his feet, as a more likely way to occasion fainting, which on this occasion may produce considerable advantages; instances not unfrequently occurring, where the patient recovers from this suspension of his faculties in a state of comparative composure, and enjoys from that pe-

riod a return and continuance of his reason.

If the first bleeding is not followed by a change in the patient's favour, it must be repeated as it shall appear needful; and if the blood can be drawn from the temporal arteries or the jugular veins, the head may probably be more speedily relieved: and should the repetition of this operation with the lancet occasion a depression of the patient's pulse as well as his spirits, notwithstanding the delirium may still continue, leeches applied to the temples, not only frequently, but almost continually, may answer the purpose of more copious bleedings. If the fever has been occasioned in female patients by the obstruction of their discharges, bleeding in the foot may be proper, after a portion of blood has been taken away as already directed.

If nature should indicate an intention to assist the patient by discharges of blood from the nose, or by the bleeding piles, it should be forwarded and promoted by every means in our power; in the former case, the steams of warm water will generally encourage the bleeding, and some even recommend force by the use of some sharp instrument; and when the stoppage of blood from the piles has occasioned or augmented the disorder, the restoration of that evacuation must be attempted, by applying leeches, warm baths or steams, and sharp clysters; and if any other evacuations have been stopped or obstructed, either natural, artificial, or accidental, such as the monthly discharges, issues, blisters, or ulcers, endeavours should also be used to restore them, or to supply the want of them by new drains, as quickly as possible.

As soon as the patient is bled, he should have a smart but cooling purge; and for this purpose use Glauber's salts, or manna dissolved in an infusion of tamarinds, to which add nitre or cream of tartar; though castor oil is to be preferred as a purge if it can be obtained: emollient and cooling clysters

clysters should also be frequently given, perhaps twice in the twenty-four hours will not be too often; but it will be necessary to repeat the purging, as well as the bleeding, till some abatement of the violent symptoms of inflammation.

In the intervals of purging, the emetic, or antimonial wine, should be given every two or three hours, in small doses, as the patient's stomach will retain it; and nitre may be mixed in all his liquids, to the quantity of two or even three drams in twenty-four hours, or his drinks may be rendered acid by Clutton's Febrifuge Spirit. Crude sal ammoniac is also recommended to be used instead of nitre, though we think the latter preferable.

The head being closely shaved, cloths dipped in strong warm vinegar, or vinegar and rose water, may be laid over it, and repeated as often as they become dry; or the following embrocation may be made use of, with which the upper part of the head may be frequently rubbed, after which it should be immediately covered with warm linen or woollen cloths.

Take equal quantities of distilled vinegar—of camphorated spirits of wine—and of spirit of sal volatile. Mix for an embrocation.

The legs should be bathed at least twice a day in warm water, and if the whole body can be conveniently bathed, it will be of great advantage: spasms, which are usual in this disease, when it is occasioned by obstructions of female discharges or the piles, will be considerably abated by general bathing.

If the disease should refuse to yield to these several attacks, it will be adviseable

to cover the whole upper part of the head with a blister; though sinapisms of stimulating poultices to the soles of the feet may be first tried.

If the patient should happily escape the fatal effects of this disease, yet his recovery is in general slow; and every precaution, with respect to the management and treatment of body and mind, should be extended a considerable time beyond the disappearance of the delirium: the mind so lately ruffled is apt to fall back upon the slightest provocation or contradiction, and Reason, when she has but newly re-assumed her seat, is subject to be perverted upon very slight and insignificant occasions.

As soon as a sufficient degree of strength returns, it is adviseable, when circumstances permit, to take the patient a journey: change of air, variety of objects, and diversity of situations, will help to dispel an oppression and air of melancholy, which are frequently the relics of this disease, and whilst they contribute to calm the mind, afford no small assistance in the recovery of the body.

It may be necessary also to caution the friends of those who have passed this disorder, never to remind them of the circumstances which have attended it; nor even to speak of it in any other manner than as of an ordinary fit of sickness: we have known instances, where indiscretions in this particular have thrown the patients back into the same miserable malady; from which, if they have a second time escaped with life, they have been condemned to spend the remainder of it in idiotic stupidity, or actual madness.

C H A P. XIII.

Of the Erysipelas, Erysipelatous Fever, or St. Anthony's Fire.

THIS disease has also a variety of provincial names or denominations; in some parts of the kingdom it is called the *rose*, and in others the *girdle* or the *shingles*: the true species is an acute and inflammatory fever; but there is also a bastard kind, which is more tedious than acute.

Persons of both sexes, and of all ages, habits, and constitutions, are liable to the attacks of this disorder; but those of full and sanguine habits of body, young people of florid complexions, and pregnant women, are more peculiarly subject to it; and it generally prevails in the autumn, when hot weather is immediately succeeded by cold; a continuance of rain, and a damp, moist, and foggy air: and those who have once suffered in this disease are extremely liable to returns of it.

The causes may either proceed from circumstances which affect the body, or those which act upon the mind: of the former, sudden changes from the extreme of heat to cold, and the contrary; sleeping on the ground, or in damp rooms; excessive drinking, violent exercise, or whatever occasions great perspiration, or suddenly checks it; obstructions of any evacuations, natural or artificial; or the impeding or stopping any accustomed drains or discharges.

Of the latter, violent passions of anger, grief, or joy; sudden impressions of fear; and whatever tends to flutter and agitate the spirits, and may quicken the circulation of the blood.

It has been also observed, that a glutinous humour is supplied by those glands which are seated immediately under the skin, in that membrane which is called the cellular,

which preserves the sensibility of the skin, and keeps it moist, by checking a proportion of the fluid which passes off through it's pores: this glutinous humour being wanting in an erysipelas, the skin is dry and parched, because the irritation of the vessels is but small, and the diseased humours having nothing in their way to prevent their passage, exhale through the vessels of the skin; and it is by the want of this glutinous humour, that an erysipelas differs from any other inflammation, either of the blood, or which appears externally.

The following seems to be an accurate description of the symptoms of this disease. It is sometimes merely a slight indisposition, which appears on the skin, hardly accompanied with a complaint, and it most commonly breaks out on one leg or thigh, or in the face; the skin become red, rough, and hard, but on the pressure of a finger the redness disappears, and returns again almost immediately after it's being removed; a burning heat is felt in the affected parts, making the patient rather uneasy than ill, but in some instances preventing his sleeping. This disorder continues to increase during two or three days, remains at it's height seldom longer than eight and forty hours, and then gradually abates, and entirely goes off about the third day after the change, or the eighth from the attack, leaving, however, a scaliness on that part of the skin which was the seat of the disorder; and this, too, generally falls off in a day or two.

But when the malady is more severely felt, it begins with violent shiverings, which are succeeded by extreme heats, excessive head-ach, languor or faintness at

the heart, sickness at the stomach, and reaching to vomit; and these symptoms continue till the eruption or external inflammation appears, and then abate, though some degree of the fever, and the sickness, or a loathing, frequently remain the whole time the disease is advancing: and when the eruption and inflammation happen in the face, the pains in the head continue even till the decline of the disease, accompanied with such a swelling of the eye-lids, as in some instances to close the eyes, and the patient hath few or no intervals of ease.

This disorder sometimes passes from one cheek to the other, and extends itself by degrees over the forehead, neck, and even between the shoulders; and under these circumstances the duration of the disease is considerably lengthened; and in certain instances it runs so high as to occasion a violent fever, to obstruct and oppress the brain by the ardency of the circulation, and to produce delirium, ravings, and extreme danger.

If the eruption of the erysipelas appears in the neck, it brings on a quinsy, with very aggravated symptoms, and not unfrequently proves fatal; when it attacks the leg or thigh, the whole of it swells, and the heat and irritation extends over the limb. Whenever the inflammation is considerable, the part it seizes is covered with pustules, filled with a watery clear humour, resembling the bladders which arise after a burn, and these pustules dry up and fall off: in some cases, when the face is affected by this distemper, the humour which issues out of these pustules is thick and glutinous, and forms a scurf or scab, in appearance like that which covers the bodies of new-born infants; and this continues on the face many days before it scales away.

In very violent attacks of this disease, it continues from eight to ten, or even twelve days, at the same height, and terminates at last in a profuse sweat; which is frequently preceded for a few hours by restlessness, shiverings, and anxiety: during

the progress of the distemper, the whole skin is dry, and the inside of the mouth.

Though the swelling of the erysipelas sometimes forms a tumor, yet it seldom suppurates, or comes to matter: if such a tendency appears, it may be necessary to promote it by poultices and fomentations; but it is, in most cases, right to avoid ripening these tumors if possible, as they seldom heal well, and are very apt to degenerate into continued ulcers.

A malignant kind of erysipelas is sometimes epidemical, and then frequently terminates in a gangrene; it also very often shifts its situation, or totally disappears of a sudden: in the latter case, the patient immediately becomes uneasy and disordered, is hot, restless, and feels a propensity to vomit; but if the erysipelas appears again, though on a different part of his body, he finds himself relieved from those disagreeable symptoms.

But if, instead of returning again to the surface of the skin, the humour falls upon the brain or the breast, the disease is generally fatal: in the former case the patient becomes immediately delirious; his countenance is flushed; his eyes are wild and sparkling; and he soon grows frantic, and by degrees sinks into a coma or lethargy, which carries him off. If the lungs are attacked by this disorder, it is attended with intense heat, and inexpressible anxiety and oppression: and when it seizes the breasts, particularly of women in childbirth, or who give suck, it is extremely hard and painful, and much inclined to suppurate; the breathing is difficult; and in these cases, it is frequently accompanied with violent pain in the axilla, or arm-pit, of the side disordered; in which part an abscess is sometimes formed.

When this disease approaches suddenly, without much previous indisposition; when the person attacked by it has a good habit of body; and when neither the nerves, membranes, or vital parts are affected; when

when the swelling speedily subsides, the feverish symptoms go off or abate, the skin turns brown or yellow, and the scurf or scale becomes loose and begins to fall off; little danger is to be apprehended: nay, in some instances, the approach of the erysipelas hath relieved other disorders, such as the cholic, asthma, and the like.

When the disease is deeply seated, and is fixed on a sensible part of the body, it is attended with very considerable danger; and more especially if it meets a bad habit of body: if any of the violent symptoms which we have described present themselves, or if the eruption assumes a livid appearance, or becomes black, and the swelling at the same time decreases, little hope can be entertained of the patient's recovery; nor does he often survive the seventh or eighth day from the attack.

Nor are all the disagreeable consequences of this fever removed with the disease itself; it sometimes leaves behind it swellings in the feet and ancles, which are not reduced without great difficulty; and those who are subject to frequent returns of this distemper, generally die of it at last.

In the management of this disease, great discretion is necessary to regulate the degree of warmth and cold; too much of either will tend to throw back the eruption, which must be carefully avoided.

The diet should be thin, and such as inclines to promote gentle perspiration: roasted apples, biscuits, raisins, and the like, may serve for solid food; the spoon meats may be panada, gruel, barley broth, and where the fever does not run high, thin chicken broth; the drinks, herb teas, elder flower tea, barley water, or if the patient's pulse or spirits should sink, wine whey or negus; and in that case he may also be allowed sago and jellies, with a little wine. If the fever is at all violent, the drinks should be acidulated with Clutton's Febrifuge Spirit, or other acids.

In slight cases, exciting perspiration by

diluting liquors, and confining the patient within doors, will in general carry off the disease, without the interposition of medicine, or other evacuations.

But if the attack threatens to be violent, if the pulse is strong, hard, and quick, bleeding may be necessary; but caution is required in the performance of this operation; and it must be repeated as the fever and strength of the patient direct. If he has had frequent returns of the disorder, and his manner of living has been free, a repetition of the bleedings may probably be absolutely necessary; they will unquestionably be so, if the disease affects his head.

If the superior parts, such as the breast, lungs, head, or brain, are the seats of complaint, bathing the extremities in warm water will be of singular use; nor will it in such cases be improper to apply poultices or sinapisms to the soles of the feet.

In all cases the bowels should be kept in a lax state, by giving whey of cream of tartar, tamarinds, or other opening acids; but if the head should be affected, purging is the only specific, and stools must be procured either with nitre and rhubarb, in the following proportions; or, if this should prove ineffectual, with clysters, or purgatives of a more powerful nature.

Take of nitre, one dram—rhubarb, six grains.

Divide into two doses, and give the second, if the first should not succeed in producing stools.

If by any exposure to cold air, or other accidental circumstance, the erysipelatous matter should be repelled or struck inward, bleeding will be immediately necessary, (unless the state of the pulse should absolutely forbid this operation) and should be succeeded by blisters, as well on the part which the eruption hath left, as on the sides of the neck; and it will in that case be right to bathe the feet and legs in warm water, and to apply sinapisms or warm poultices to the soles of the feet.

Should

Should such a disappearance of the eruption occasion faintings, a drooping pulse, and depression of spirits, cordials of wine diluted according to the circumstances, and medicines calculated to augment the perspiration, should accompany the blisters.

When blisters are requisite in this disorder, the following composition is recommended.

Take equal parts of common blistering plaster and the stomach plaster; add from one to two drams of camphire dissolved in spirit of wine. Mix them well together.

Spread this composition on leather, and then warm the plaster moderately by the fire, and lay over the surface of it a piece of fine soft muslin, so as to be next the skin on application. Blisters thus prepared will occasion much less irritation than the usual ones, will produce no strangury, or but a very slight degree of it; and when the removal is necessary, will separate from the skin with much greater facility, nor will this covering at all prevent the blister from rising.

The common blistering plaster is prepared as follows.

Take of drawing plaster, half a pound—of cantharides or Spanish flies, four ounces—of vinegar, half a jill. Melt the plaster, and before it begins to harden, sprinkle in the cantharides, being very finely powdered; then add the vinegar, and beat the whole well together.

The stomach plaster is composed—

Of soft labdanum, three ounces—of frankincense, one ounce—of cinnamon, and expressed oil of mace, of each half an ounce—of essential oil of mint, one dram. First melt the frankincense, then add the labdanum heated till it becomes soft, and then the oil of mace; afterwards mix in the cinnamon with the oil of mint, and beat the whole together into a mass in a warm mortar, and keep it in a close vessel.

In the wandering kinds of this disorder, that is to say, when the eruption and inflammation shift from place to place, give half an ounce of the rob of elder three or four times a day, with five or six grains of the sal polychrestum in each dose; every third day give a cooling purge of manna, or Glauber's salts, dissolved in an infusion of fenna; bathe the extremities every evening in warm water, and then apply sinapisms or warm poultices to the soles of the feet.

From the peculiar difference of the skins of different persons, and from the nature of the disease itself, external remedies should be applied with extreme caution. In the beginning of the disease, the part may be kept from the air by soft flannels or other light woollen cloths; when the external skin is raised in blisters, and the humour begins to pass off, such applications are proper as will absorb the matter, and fine linen rags, on which finely powdered chalk or flour has been well sprinkled or dusted, will answer this purpose, or flannels dipped in a decoction of elder and camomile flowers, and wrung dry, may be applied to the inflamed parts, and renewed as often as they grow cool.

Goulard's Saturnine Water hath also been recommended as a safe application, where a resolution of the inflammation is attempted; but we apprehend great care should be taken not to use it till the eruptions are compleatly filled, and the humour or matter is disposed to pass off voluntarily.

If a gangrene or mortification is threatened by the appearance of livid, black, or blue spots, about the eruptions; the bark, camphire, and acids, should be freely administered, as prescribed in putrid and malignant cases: nor are small quantities to be depended on; an ounce or more of the powder, and proportionably in other forms, should be taken in the twenty-four hours; and spirituous and strengthening applications should be used externally, such as
cloths

cloths dipped in lime water mixed with camphorated spirit of wine, or the camphorated spirit with the tincture of myrrh, or a strong decoction of the bark; some advise poultices composed of bread or flour and the powder of the bark, and wetted with the hot decoction of that medicine, to be applied to the part affected, and renewed frequently.

Applications of ointments, salves, oils, and plasters of a greasy nature, should by no means be suffered; they tend to repel or obstruct the passage of the watery humour which is required to be carried off, and which it should be our care to promote and not to retard.

There is also another disorder, which, from a similitude of external appearance, hath been denominated the *scorbutic erysipelas*; but as we are satisfied that this is actually a scorbutic and not an inflamma-

tory eruption, the treatment of it will be found under the head of *scurvy*.

To escape the erysipelas, the same precautions are necessary as we have recommended for the prevention of other inflammatory disorders; those who are subject to frequent returns of it, will do well to remark if it is apt to follow any particular indulgence or excess, either of food, liquors, or the passions, and from hence they will be enabled to gather the best regulations for avoiding this troublesome and ultimately dangerous disease. General rules apply to almost all distempers, but not to all constitutions or habits of body; air, exercise, mediocrity of heat, light and cooling food, small and diluting liquors, and bowels kept open if necessary by gentle laxatives, will in general prepare the body to resist the attacks of this, as well as most other maladies.

CHAP. XIV.

Of the Quinsey, or Inflammation of the Throat.

THIS disease is an inflammation of those parts of the throat which serve the purposes of breathing, speaking, and swallowing; it is by some called a *strangulation of the fauces*, or *passages into the gullet*; it is an acute and inflammatory disorder, attended with a fever: when it is epidemic and infectious, it generally prevails in the latter end of the spring, or early in the summer, and most commonly after a long continuance of rainy or damp weather; and the young, the sanguine, and those whose blood is of an inflammatory disposition, are most liable to it.

The causes are in general such as excite other inflammatory disorders, and in particular obstructed perspiration, the effect of which is so suddenly and violently felt in

the throat, that the omission of cloathing that part of the body as warm as usual, sitting with the neck against a window, going out of a warm room into the cold air, or even drinking a draught of cold liquor when the body is heated by exercise, will frequently occasion inflammations of the throat or quinseys; other matters tending to inflame the blood, such as neglecting accustomed evacuations, may also produce the same effect.

Violent exertions of the voice in singing, speaking in public, huzzaing, cheering the hounds in hunting, and the like, may occasion this disease; orators or speakers in public assemblies and courts of law are peculiarly liable to it, and so are actors and singers on the stage.

It may also be brought on by damps and chills of all kinds; exposure to the night or morning air; damp sheets, beds, or linen; newly built, plastered, or painted houses; rooms newly washed; wet feet; wet cloaths; and, in short, by whatever tends to lessen or check perspiration.

Sore-throats or quinsys may also arise from accidental injuries received by swallowing fish bones, splinters, pins, or other solid and sharp substances, which may either stick in the throat, or lacerate it in their passage through it.

The symptoms of this disease are, at first, pains without any apparent cause, a stiffness or difficulty of moving the neck and throat, a considerable discharge of saliva (or that matter which is expressed from the glands of the throat, and serves to moisten that part as well as the tongue and mouth) without any visible tumor, a dull pain and sensible roughness in the first passages to the gullet, and a difficulty of swallowing the fluid which usually gathers in the mouth; and these are followed by an impediment in breathing, like the clogging of some gross humour. As the disease increases, the part grows red, the tumor becomes manifest, and at length the fauces or passages into the gullet, the uvula or valve, which dividing the nostrils and throat enables us to breathe through either, and the upper part of the throat, are swelled to a remarkable degree, occasioning a difficulty of swallowing and a strangulation or choaking, proportioned to the tumor; a suppression of the breath, and a continual pause; and, if the tongue be pressed with the finger, a dry tension or stiffness is perceivable. When this disorder is in it's aggravated state, the tumor or swelling spreads over the neck and face; the mouth overflows with spittle or saliva, and a thick, tough, and glue-like humour; the eyes are blood-shot, and appear starting out of the head; and the veins are full and distended. In the farther progress of the

disease, the tongue swells, and is forced as it were over the teeth; the passages from the throat are dry, the joints are cold and benumbed, the pulse is quick; the patient complains of extreme difficulty in lying on the back or side, and expresses an earnest desire to sit up; and his speech is painful, confused, and inarticulate: as the disorder draws nearer to a fatal period, every symptom increases in violence; the patient's face becomes livid; he loses the powers of speech; there is a rattling in his throat and breast; whatever liquid he attempts to swallow flies out at his nostrils; the pulse fails; in some instances he howls like a dog, in others foams at the mouth; and death speedily ensues to relieve him from agonies no longer supportable.

If there is no apparent tumor, the neck is particularly slender, erect, and immovable, so that the patient can neither incline or turn his head; the eyes are hollow, the face wan and sunk, the forehead stretched, the colour livid, breathing extremely difficult, the patient's strength suddenly fails, his intellects and spirits become dull, and he dies under a speedy and acute suffocation.

Such are the symptoms of the quinsy, distinguished from all other complaints of the throat, by being invariably attended with fever, suppression of the breath, and difficulty of swallowing.

To avoid this disease, we must shun excess of every kind, agitation of the body, contrarieties of air, food, and liquors; irregularities in living, and impetuosity of the passions; which may tend to inflame the blood. We must be careful in the lesser articles, which either contribute to health or occasion sickness; and we must on no occasion forget, that whatever checks, impedes, or lessens the natural evacuations, and in particular perspiration, will most probably occasion a disorder, which, though generally disregarded at first, will become troublesome, dangerous, and even fatal.

The

The danger of this disease is generally estimated by the degree of fever, and difficulty of breathing; and a sudden removal of the inflammation from the external parts frequently occasions convulsions, delirium, and a peripneumony, or inflammation of the lungs, too often mortal; frothing at the mouth, considerable swelling of the neck, and the formation of an abscess in the throat, are also dangerous symptoms; and if the tongue becomes of a dusky red colour, if the extremities grow cold, if the breast seems contracted and oppressed, and the pulse is hard and intermitting, or if a gangrene or mortification should come on, the case will then be desperate: much thick and tough saliva is a bad sign in the beginning of the disorder, and great pains in the head and limbs are also unfavourable symptoms.

But if the troublesome suffocation and difficulty of breathing abate; if the pain and inflammation continue or increase externally; if an erysipelatous eruption appear, and remain on the neck and breast; and if in the decline of the disorder the patient discharges a considerable quantity of glutinous matter; the disease will in all probability end favourably.

The diet and liquors in this disease should be of the same kinds as those we have already directed in inflammations of the lungs and pleurisies; the latter should be acidulated, and drank about the warmth of new milk.

The treatment must be nearly the same as has been prescribed for inflammatory fevers; in this case, the fever and particular inflammation being reduced, the cure follows of course.

Bleeding therefore will be immediately necessary; some prefer the jugular veins to those of the arm, and others mention bleeding under the tongue; but this is in general attended with considerable difficulty: the quantity of the blood drawn must depend on the degree of fever; if it runs

high, a large portion may be taken away, even till the patient faints; and this operation must be repeated, or not, as circumstances may direct.

The body should be kept open during the whole progress of the disease; if gentle laxatives will not answer that purpose, the following purge may be given, and repeated daily for the first three or four days.

Take infusion of fenna, from two to three ounces—Glauber's salts, from half an ounce to one ounce.

If this should not operate speedily, the passage of it may be hastened by a clyster; and if the fever is high, a dram of nitre should be dissolved in it: if the throat should be so swelled as to render it impossible to get down these purging draughts, clysters of purgative medicines with nitre should be administered daily.

For the clyster—

In a pint of chicken broth, or oatmeal gruel, dissolve one dram of nitre, and add from four to eight grains of jalap.

The following gargarisms, (or gargles, as they are more commonly called) are recommended under the different circumstances.

In the early stages of the disease—

Take of the pectoral decoction, half a pound
—of crude ammoniac salt, one dram.
Dissolve the salt in the decoction, and shake the bottle before it is used.

In case of great pain and heat, the syringe should not be used, but the patient should be encouraged to wash his mouth and throat frequently with hartshorn-jelly, or the julep of roses, in either of which may be dissolved a small quantity of nitre and camphire.

If the throat is dry, and the tongue is swelled, and affected with an intense burning heat,
Take

Take white of egg, beaten or stirred to a watery liquor, two ounces—rose water, and syrup of mulberries, of each one ounce—sal prunella, fifteen grains.

If the quinsey is of the internal kind, and without any apparent swelling or tumor, the mouth and throat should be very frequently gargled with milk, in which sal prunella hath been dissolved.

When a thin acrid humour falls upon the glands of the palate and throat, use the following gargarism.

Dissolve one dram of white vitriol in one pint of pure water.

But if only the mouth is dry and parched, the foregoing emollient gargle of the pectoral decoction, and sal ammoniac, will answer the purpose.

In quinseys of an inflammatory nature, acid gargles will be proper after the inflammation is somewhat abated, but by no means before, as they are hurtful, by contracting the emunctories or passages in the throat for the carrying off the saliva and matter, and by thickening those discharges. When the disappearance of the inflammation renders an acid gargle proper, it may be of this form.

Take of tincture of red roses, two ounces—of spirit of vitriol, ten grains.

Some recommend the holding a small piece of sal prunella in the mouth, suffering it to dissolve on the tongue, and swallowing it as it melts; in less severe attacks of this disorder, this practice will frequently render gargles unnecessary; perhaps, in this state of the disease, syrup of black currants mixed with warm water will be found as useful a gargle as the foregoing.

If the body is sufficiently open, or in the intervals between the purges, saline draughts with nitre will be extremely proper.

It will also be right to attempt lessening the internal inflammation by external applications; for this purpose the volatile li-

niment is commonly used, and flannels dipped in it are usually wrapped round the throat; the following may probably succeed rather better.

Take of olive oil, one ounce—of the volatile spirit of ammoniac salt, from two drams to four—of camphire, half a dram. Make a liniment, and gently rub the outside of the throat and neck with it, frequently applying a piece of flannel cloth quite round the neck immediately after this liniment hath been used.

If the symptoms advance in severity, blisters must be applied between the shoulders and behind the ears, and the size must be governed by the circumstances; a blister across the throat may possibly produce more advantageous consequences than the stimulating applications which we have just prescribed.

But if the situation of the complaint, or a wish to preserve the skin, prevents the application of a blister to the part, and the external inflammation is very considerable, discutient or dispelling fomentations and poultices may be used; for the latter—

Mix barley meal and vinegar to a proper consistence; and add, if at hand, two ounces of the fresh leaves of hemlock bruised.

Or the following liniment may supply the place of the fomentations and poultice, rubbed on the neck three or four times a day; flannels may be also dipped in it, and kept constantly about the part.

To half an ounce of camphire, add a sufficient quantity of sweet oil to make a liniment.

If the difficulty of swallowing is attended also with such a suppression of breath, as to threaten speedy suffocation, before medicine or external applications can procure an abatement of the inflammation, the only possible means of saving the patient's life, is the performance of bronchotomy, or opening

opening the windpipe; and as it has often proved successful, it ought not to be omitted in the desperate circumstances we have described; but as this is an operation of surgery, an account of it here will be unnecessary.

Under the treatment we have pointed out, a suppuration rarely happens; but if it can by no means be prevented, and matter is actually formed, it will be right to forbear as well all evacuations, as all attempts to repel; and this may in most cases be discovered by a general uneasiness; a pain in the mouth; shiverings, succeeded by transient heats; a sensation of heaviness, and thickness of the tongue; small white pustules or bladders on the inside of the lips and cheeks, and on the gums; and by a disagreeable taste in the mouth, and a smell offensive to the patient himself; in this case poultices should be applied warm to the neck, and the steams of warm water, or rather of vinegar and water, should be received into the mouth: as soon as the suppuration takes place, the swelling in most cases abates, the symptoms become less violent, and the matter generally opens itself a way, either externally or internally; if not, the abscess should be punctured or pricked as soon as the matter appears in a fluctuating state; if it opens externally, the ulcer is commonly healed without much difficulty, but when it breaks within, the matter is apt to fall on the lungs, and occasion ulcerations there; to prevent which the following gargle should be used immediately after the matter begins to discharge.

Take tincture of red roses, three ounces—
tincture of myrrh, two drams—spirit of vitriol, twenty drops.

But in the lighter attacks of this disease, when the difficulty of swallowing is unattended with acute pain, or any degree of inflammation, and when the breathing remains free and uninterrupted, the disorder is generally occasioned by an obstruction of

the glands; and in that case, little more is required than to keep the patient warm, and to use some stimulating gargle, such as a decoction of figs, with the addition of vinegar and honey, or a small quantity of the flour of mustard, which will generally remove the complaints; care however must be taken not to use this gargle when any tokens of inflammation appear, as it would rather add to it than contribute to its abatement.

Indeed, a little precaution will, for the most part, prevent the appearance, at least the danger of this disorder; those who are subject to it should submit to the regulations of temperance and regularity, and should be particularly attentive to promote ordinary evacuations, and to have recourse to extraordinary ones, such as bleeding or purging, at such seasons of the year as they have reason to expect attacks.

And if all those who feel the approaches of this disease would carefully apply flannels to their throats, or even the vulgar remedy of the woollen stocking; if they would be content to abridge themselves for a few days in the articles of eating and drinking; if they would keep within doors, and drink pretty freely of diluting liquors, and bathe their legs and feet every night in warm water, taking care at the same time to keep the body open by manna, a decoction of tamarinds, or such gentle laxatives; they would have little to apprehend from the progress of this disease, which would in most cases yield to such simple and easy prescriptions.

To these prescriptions the following may be added; and, combined with the foregoing, will in most cases prevent the common fore-throat from degenerating to a troublesome and dangerous quinsy.

Use the jelly or syrup of black currants freely: the former should be melted in the mouth, and swallowed by degrees; the latter may be used in the same way, or mingled with warm water as a gargle.

The following gargle is in general of itself sufficient to carry off a fore-throat unattended with inflammatory symptoms.

To half a pint of strong decoction of sage leaves, add a glass of Port wine, an equal quantity of good vinegar, and two teaspoonfuls of honey.

And a flannel dipped in the following liniment and worn round the throat, renewing it twice or thrice in the twenty-four hours, will be found almost a specific.

Take of Florence oil, two parts—of spirit of hartshorn, one part. Shake them well together.

CHAP. XV.

Of the Putrid, Malignant, or Ulcerated Sore-Throat.

THE appearance of this disease in Great Britain is of a very modern date; it appears to have been well known to some of the ancients, whose treatment of it differed very widely from that at present in use; and, indeed, little information as to the method of cure can be derived from their works, though many of them described this disease accurately. It was, however, observed by these writers, that it was most particularly fatal to children; that though adults, if they were much about the sick, were often seized with it, yet more of these recovered than of children: and it was also remarked, that more boys got through it safely than girls, and that such of the latter as had black eyes suffered more in it than others.

It is a putrid remittent fever, accompanied with an ulcerated sore-throat, or with an inflammation of the mucous membrane, being that which covers the back part of the mouth and entrance into the throat, and receives that matter which is usually carried off through the nostrils.

This malady is most frequent in the autumn, and the first part of the winter; and it has been remarked in this country lately, as well as in others formerly, that children and young people are more exposed to it than grown persons or those advanced

in years; that more girls have it than boys; a greater number of women than men; and that those of either sex who are weakly or infirm, are more liable to have this disorder, and to suffer severely from it, than the healthy and vigorous: few adults of such constitutions are affected by it, and when it does attack them it very rarely proves mortal.

By it's more common appearance at a particular season, it should seem as if the weather and temperature of the air did in some degree contribute to it's approach, and that it might be produced by colds, which in the autumn and early winter generally prevail; but it is much oftener bred by contagion, being so highly infectious, that when it breaks out in a family, it generally goes through all the children, and all their immediate attendants, though in a less violent degree; and this in spite of separating the healthy from the sick, and using every precaution that can be advised.

This disease generally comes on with a giddiness in the head, like that which commonly precedes fainting, and a shivering or chill resembling that of an ague-fit; this is immediately succeeded by intense heat, and these shivering heats continue to succeed each other interchangeably for some hours,
till

till at length the heats predominate and become constant and violent.

The complaints of the patient are then an acute head-ach; heat and soreness, rather than any considerable pain in the throat; stiffness of the neck; usually great sickness; and sometimes, but not in all cases, vomiting or purging, or both: the face soon after looks red and swelled; the eyes watery and inflamed as in the measles; and the patient grows restless, anxious, and faint.

The attack is frequently made in the morning, or early part of the day: towards the approach of night the symptoms increase in violence, and continue to be extremely troublesome till the morning; when, after a short, disturbed, and interrupted slumber, (which is indeed the only rest that can be procured for many nights) a perspiration breaks out, which alleviates the restlessness and heat, and gives the disorder somewhat of an intermittent appearance.

If the mouth and throat be examined soon after the first seizure, the *uvula* and *tonsils*, or *almonds*, as they are commonly called, appear swelled, and, as well as the palate at the part near the throat, the farther part of the cheeks, and that muscular or fleshy part at the back of the throat, which is called the *pharynx*, or as much of it as can be seen, appear of a lively red colour; and the same appearance is also observable on the posterior edge of the palate, in the angles which are above the tonsils, and upon the tonsils themselves. Sometimes, instead of this redness, a broad spot or patch of an irregular figure, and of a pale or whitish colour, appears surrounded with the florid red, and this whiteness is like the gums when they are pressed with the finger, or as if matter ready to be discharged was contained beneath it.

On the second day of the disease, the face, breast, neck, and hands to the tops of the fingers, generally assume a deep claret

or erysipelatous colour, with an apparent swelling; and the fingers are often so remarkably tinged, that the disorder is in some instances discoverable from inspecting them only.

On the arms and other parts of the body, a great number of small pimples appear, evidently distinguished from the surrounding or intermediate skin by being of a deeper red; and these pimples are larger, and rise higher on those parts which are less affected by the redness, which are generally the arms and lower extremities: but this eruption is not a certain symptom, nor attendant in all cases; nor is its appearance certain as to time, happening sometimes earlier, and sometimes later.

But when the skin acquires this red colour, and whether accompanied with pimples or not, the sickness generally goes off; the vomiting and purging commonly cease of themselves, seldom continuing beyond the first day.

The appearance in the fauces, or openings into the passages of the throat, continue the same, only that the white changes to an ash colour; and it may now be discovered, that what might at first have been taken for the superficial covering of matter in a ripened state, is really a slough, concealing an ulcer of the same size.

The different parts of the fauces are alike liable to these ulcerations, but they are in general discernible first in the angles above the tonsils or almonds, or on the tonsils themselves, though they are often to be found in all the other parts of the mouth which are nearest to the throat, and on the base or root of the tongue, which they cover in the manner of a thick fur: when the disorder is mild, a superficial ulcer, irregular in figure, appears instead of these sloughs in one or more of the same parts, and as the external skin does not assume the whiteness, is scarce to be distinguished from the sound parts but by the inequality it occasions on the surface.

The

The parotid glands (which, as we have before described, are seated before and below the ears) generally swell on each side, and grow hard and painful to the touch; in some cases, where the disease is violent, the neck and throat are surrounded with a large tumor, sometimes extending to the breast; which, by straitening the passages, adds to the danger.

Towards the approach of night, the restlessness, anxiety, and heat, increase, and a delirium often comes on, in some cases even on the very first night after seizure: but this symptom differs considerably from the same disposition in other disorders; the patient in this disease generally answers with propriety the questions put to him, but there is an unusual eagerness and quickness in his speech, and he is apt to talk wildly and incoherently to himself when left alone; and the first tendency to this distemper is frequently discoverable in an extraordinary affectation of great composure, especially if he is disinclined to sleep; for some are heavy and drowsy from the first attack, and as the disease advances grow stupid, and take very little notice of any thing about them.

In this situation the patients generally continue for two, three, or four days, growing more hot and restless towards the evening; and the same symptoms, together with the delirium, increasing on the approach of night. As the morning advances, a sweat, more or less profuse, breaks out, and gives a temporary relief to most of the complaints, though the languor and faintness remains, which indeed accompanies every stage of this disease from the commencement to the period.

There does not seem to be any fixed crisis at which this disorder can be described to be at the height: in some instances the symptoms abate from the very first day of the seizure; in others, and more commonly, no appearances of recovery take place till the third, fourth, or fifth day.

The favourable circumstances are nearly

as follow; the redness of the skin wears off; the pulse, which in the progress of the disease is quick, becomes much less so; the swellings of the neck subside, (except those of the parotid glands, which frequently continue hard after the abatement of the other symptoms, and sometimes come to matter;) the sloughs are cast off; the cavities occasioned by the ulcerations fill; the patient's sleep is less disturbed; and he awakes in a state of composure, and begins to find some return of appetite.

During the whole course of this disease, the pulse generally continues very quick; in some cases it beats hard and small, in others more soft but full, and it is in general without the firmness and strength which usually accompany quickness and heat in disorders of an inflammatory nature.

The urine is at first crude, and of a pale whey-like colour: as the disease advances, it inclines to yellow; and on the appearance of approaching recovery, it becomes foul, and drops a sediment like meal or flour.

The commencement of the disease is frequently attended by a purging, which is sometimes of a bilious nature, and discharged without pain, though this evacuation differs in different habits: from the time the purging ceases, the patient has seldom any voluntary stools.

Thirst is commonly less complained of in this than in other acute diseases; the tongue is generally moist, and not always furred; but when it is covered with a thick white coat, the patient generally complains of soreness about the root of it.

The *uvula* and *tonsils* are sometimes so swelled as to leave the entrance into the gullet extremely narrow, and though that entrance is also often surrounded with sloughs or ulcers, yet is the swallowing attended with much less difficulty and pain than might be apprehended from such circumstances: but patients are apt to complain soon after they are taken ill, of an offensive smell which affects the mouth and nostrils, and

and occasions sickness even before the appearance of ulcerations.

When the disease is severe, the insides of the nostrils, as far up as can be seen, frequently appear of a deep red, or rather livid colour; and after a day or two a thin humour, sometimes accompanied with white putrid matter of a thicker consistence, flows from them, which is so acrid and corrosive as to excoriate or fret the part it is suffered to remain on for any considerable time: but this is most observable in very young patients, whose lips are also of the same deep red or livid colour, and are covered within with little bladders which contain a thin humour of the same quality, excoriating, as it oozes out, the corners of the mouth, or even the cheeks, if it is permitted to fall upon them.

Nor is it improbable, that some part of the same acrid humour passing with the nourishment of children into the stomach, may occasion their generally suffering much more in this disorder than grown persons, producing unquestionably the same effects on the internal parts, as it does on the skin, of those which are much less sensible, by excoriating the parts which it passes; and this seems to be frequently the case, when a purging, attended with the symptoms of ulceration, succeeds the disease; and after the patients have endured great pain and misery, in some instances for many weeks, they die in a state of emaciation: and in these cases the humour has sometimes retained its virulence in passing through the whole intestines, and actually corroded and excoriated the skin at the extremity of the gut; and the same complaint has sometimes been made by grown persons, who have been obliged to swallow considerable quantities of emollient healing liquids, and to apply them externally in fomentations, to abate the violence of this very troublesome symptom.

Bleeding at the nose is no uncommon symptom at the beginning of this disease;

and the monthly discharges of those of the female sex who are of age to be subject to them, very commonly appear immediately after the seizure, notwithstanding the regular time of their return may be at a considerable distance: if this disorder seizes them about the common period, the discharge is generally greater than usual, or than it ought to be; and the approach of this disorder hath frequently brought on the periodical discharge in persons who never had the least appearance of it before.

These evacuations are seldom attended either with much benefit, or any considerable degree of injury in strong and robust habits, unless they are excessive; in which case they occasion great faintness, and proportionably augment the other symptoms; but in tender frames and weakly habits, they are often productive of ill consequences: instances have been known where patients have been suddenly carried off by discharges of blood from the nose, and even by a profuse bleeding at the ear; but these accidents generally happen after the illness has continued many days, and may more probably have proceeded from the separation of a slough from the branch of an artery, than from a fullness of the vessels; nor can any such discharge be considered as an effort of nature to relieve herself by this crisis, which much oftener brings on danger than recovery.

Bleeding is seldom or ever allowable in this disease; and though, where it has been practised, the heat and quickness of the pulse seem at first to be abated by it, yet this is a very fallacious respite; the symptoms generally return with greater violence, and the patient is oppressed with a difficulty of breathing, falls into cold and clammy sweats, grows stupid, and dies suddenly.

Greater benefit is not to be expected from purging: gentle laxatives have brought on very dangerous symptoms; and even giving a small quantity of manna, to procure a stool or two, after the disease hath continued

nued two or three days, has occasioned the disappearance of the red colour, and surprisingly increased the flux of matter to the throat; and if the discharge by stool is at all considerable, the swelling of the neck generally grows much larger, the entrances of the throat become loose, dry, and livid, and the patient seldom survives the appearance of these symptoms many hours.

The same effects are frequently experienced from administering nitrous or cooling medicines; these, too, increase the languor and faintness which commonly accompany this disease, and either occasion copious weakening and wasting sweats, or immoderate discharges by stool.

And upon the whole it appears, that every evacuation which tends to lessen the natural strength of the constitution is in this disorder injurious, and that it is attended with the greatest danger, when it attacks such habits as have been weakened by previous sickness, or where the strength has been impaired by grief, or other indisposition of the mind.

In the unfavourable state and progress of this disease, the fauces appear dry, livid, and glossy; the tumor grows large externally; the patients void their excrements involuntarily, and fall into profuse sweats; the breathing becomes difficult and laborious, and the pulse low; the extremities are cold; the eyes grow dim; and death in a very short space finishes the melancholy scene: and it has been remarked, that the approaches of death are foretold in this disorder, by the appearance of the eyes, which lose their lustre and the powers of sight earlier in this disease than in most others.

In order to enable our readers to discover the putrid and malignant fore-throat from the common inflammatory or quinsy, it may be necessary to state the different symptoms which occur, to mark and ascertain each disease.

The *putrid malignant and ulcerated fore-throat*, generally attacks children, and girls

more frequently than boys; if grown persons are seized with it, they are mostly those who have been much about the sick, or such as are of infirm and broken constitutions; and those who have been weakened and reduced by some previous illness, by some excess in natural evacuations, or by any accidental discharges, suffer most severely in it.

But the *common inflammatory fore-throat*, or *quinsy*, generally attacks the robust, vigorous, and healthy; and tender, weak, and delicate habits, are less liable to it, and suffer less from it.

Both diseases commence with a fever, and shivering or chillness; but in the putrid kind, these symptoms are followed almost immediately, if the seizure be very violent, and if less so, in a very few hours, by sickness, vomiting, or purging; and an acute pain of the head, especially towards the back parts or crown; and when these complaints are accompanied with that kind of erysipelatous redness, which we have before described in the back part of the mouth and passages to the throat, with sloughs and ulcers, no doubt can remain of the nature of the disease.

Another obvious and characteristic symptom of the putrid fore-throat, is the redness of the skin in the face, hands, neck, and breast; which seldom fails to shew itself in this disorder, and particularly in children and young people.

A partial inflammation is the disease in the common fore-throat; all the symptoms are inflammatory, and the principal complaint is an acute throbbing pain in the throat, which is greatly aggravated on swallowing even liquids.

But in the disorder of which we now treat, the whole habit suffers, as if by a force of a peculiar nature; and though the throat is always affected in a greater or lesser degree, yet this is sometimes the least troublesome of the patient's complaints, instances not unfrequently occurring of considerable

siderable sloughs being formed before any forenefs or pain hath been felt in the parts where they have been feated.

This difeafe is very frequently accompanied with a tendency to delirium, and that too fo early as the fecond, and in fome inftances the firft day after the feizure; but in the common fore-throat, if this fymptom appears at all, it is in the very advanced ftages of the diforder, and when the patient is in extreme danger.

When the patient recovers from the common fore-throat, the fwellings difperfe, or the parts affected fuppurate or come to matter; or if they fhould be on the glands, become hard or fchirrous: but in the putrid or ulcerated kind, neither of thefe circumftances take place; it terminates in a superficial ulceration of the throat and paffage into the gullet, with very little appearance of floughs in the mild ftate of the difeafe; and with large and deep ones of an afh, livid, or black colour, where the attack is more violent.

From this comparative view of the different fymptoms, it will not be difficult to diftinguifh this diforder from a common fore-throat, or inflammation of that part; but there is another, and too often a fatal diftinction, which is the conftant aggravation of all the fymptoms after bleeding, purging, or the free ufe of cooling medicines; methods which feldom fail to remove a common inflammation when taken in time and purfued with affiduity, but which are always injurious, and too often deftructive, when this diforder is of the putrid kind.

In this difeafe it is neceffary that the patient fhould keep as much as poffible in bed, even though the difeafe fhould feem to be flight; neglect in this particular has often brought on a purging which has occafioned the difappearance of the rednefs on the fkin: and complaints, which with confinement alone might probably have gone off in a day or two, have been rendered tedious and difficult of cure.

The patient's food fhould in this difeafe be ftrengthening and nourifhing; and confift of panada, and jellies with wine, or of chicken broths: his liquors alfo fhould be generous and antiputrefcent; fuch as good wine-whey, negus of Port wine, and even wine alone when the faintnefs or languor is exceffive.

As foon after the attack as poffible, and whilft the ficknefs and difpofition to vomit continue, it will be right to promote it by green tea, camomile-flower tea, or the infufion of the *carduus benedictus* or *holy thiftle*, or it may be advifeable to give a few grains of the powder of *ipeacuanha*, or rather fmall quantities of the *tartar emetic*, either of which may be worked off with moderate quantities of camomile tea: and if thefe fymptoms do not abate with the operation of the emetic, fmall draughts of mint tea, with a fixth part of red Port added to it, may be taken frequently, together with fome fuch grateful warm aromatic and cordial medicine as the following.

Take of fimple alexiterial water, fix ounces—of fpirituous alexiterial water with vinegar, one ounce and half—of cordial confection, thirty grains—of contrayerva powder, thirty grains—of fyrup of faffron, half an ounce. Make a mixture, of which give from two to four table-fpoonfuls according to age and circumftances, and repeat every four or fix hours.

Though vegetable acids, fuch as the juice of lemons and oranges, wood forrel, verjuice, vinegar, and the like, are ftrongly recommended in moft difeafes of a putrid nature, as they are unquestionably of an antiputrefcent quality; yet we ought to be very circumfpect in ufing them, and efpecially in this diforder, as they are apt to promote too great a difcharge by ftool, and to occafion profufe fweats, the dangerous tendency of which evacuations we have already pointed out.

And

And indeed it is at all times necessary in this disease to attend very carefully to the diarrhœa: in most cases it ceases with the vomiting, and that within twelve hours after the first seizure; if it is of longer continuance it will be necessary to check it, or it will occasion great faintness, sink the spirits, and in the end produce the worst consequences. The aromatic cordials, which we have already prescribed, administered freely, will in most cases take off this symptom; but if they should at any time prove ineffectual, it will be necessary to have recourse to astringents and opiates, in proportion to the exigency of the case, such as the *confectio fria castorii*, or diascordium, or the *electuar. e scordio*, or electuary of germander, dissolved to the quantity of three drams in six ounces of simple cinnamon water, of which a table-spoonful or two may be given after every loose stool.

As the redness of the skin generally appears on the abatement of the diarrhœa, and in most cases disappears again on the return of any degree of looseness, patients have sometimes been brought into extreme danger upon giving even mild laxatives, which have almost immediately occasioned the re-commencement of the purging, and the disappearance of the redness; and as these circumstances prove a close connection between the appearance of the skin and the diarrhœa, they point out the use of a warm regimen, notwithstanding the heat and other symptoms of the like kind might otherwise render such treatment a doubtful measure.

In most other fevers it is not advisable to apply blisters in the beginning of the disorder, but in this we cannot be too early in the use of them, and the following method of preparing them is recommended; because, as in these cases, the skin is easily inflamed, this mild plaster will raise it sufficiently, and will also at the same time act as an antiputrescent.

Take two parts of the stomach plaster or cummin plaster—one part of blistering plaster—and one dram and half of camphire finely powdered. Mix them well, and spread on leather or thick linen, and cover the surface with muslin.

This blister may not only be applied between the shoulders, but below the ears down to the collar bones, as occasion may require.

The excessive faintness is also another symptom which requires particular attention; this is a complaint which is generally made immediately after the seizure, and in most cases continues till the disorder abates: as the disease is more or less malignant, this symptom is proportionably violent; and when it ceases or becomes less troublesome, recovery may be expected with confidence.

The gently stimulating, warm, and aromatic medicine, which we have already prescribed to check the vomiting and looseness, has in general been found useful in relieving the faintness; nor must a degree of heat, or a quick pulse, dissuade us from administering them as liberally as necessity may require, or as the faintness, occasional depression of the pulse, and increased putridity about the region of the throat, may demand: one dram of Raleigh's confection, given every four hours, has been known to produce a very favourable change, and to lessen considerably the faintness as well as the heat and restlessness.

But perhaps no cordial will be found more efficacious than sound and generous wine, in the use of which the patient should be indulged, not only in his drinks and spoon-meats, and diluted with water, but even in moderate quantities alone, where the faintness is excessive: the patient's habit, constitution, and usual course of life, together with the state of the disease, and the appearance of the symptoms, will furnish the best rules as to the frequency and manner of permitting the use of this cordial.

Nor

Nor must we be unmindful of the condition of the throat itself, and the ulcers formed there, as it will not bear any considerable loss of substance without immediate danger to the patient's life, or consequences injurious to the future action of the parts if the patient should happen to survive.

In the more mild attacks of this disease, the superficial appearance of the ulceration is so slight, that it may easily escape the observation of those who are unacquainted with it, or whose attention is not very particularly engaged in the discovery of it: the next degree is accompanied with a thin, pale-coloured or white slough, which in more malignant cases is thick, clear, and of an ash colour; and when the case is aggravated and dangerous, the appearance of the slough is livid or black: and these sloughs are not composed of any foreign matter spreading on the surfaces and forming coats or crusts, but are the substance itself in an actual state of mortification; and whenever they come off, or are by any means separated from the parts which are covered by them, they leave ulcers, of depths proportioned to the thickness and size of the sloughs.

These sloughs in most cases come off spontaneously when the tendency to putrefaction is stopped; or if they are large and cast off slowly, the separation may be promoted by touching them with an armed probe dipped in *mel Ægyptiacum*, or Ægyptian honey, or in the following composition.

Tincture of red roses, two ounces—*mel Ægyptiacum*, two drams. Mix together.

But if, from the extreme swelling or soreness of the parts affected, this cannot easily be done, the gargle hereafter prescribed may be used, adding to two ounces of it one dram of the *mel Ægyptiacum*.

But we can by no means advise any at-

tempts to remove the sloughs by force, or the scraping them with the finger or any instrument, much less can we recommend the scarifying them; for though both these methods seem to have prevailed in ancient practice, yet the experience of the more modern hath convinced us, that they are both injurious and extremely dangerous; in some cases occasioning immediate mortification, and in others the removal of the sloughs hath been followed by the parts being again covered with them in the course of a few hours, of a larger size and much worse colour, and penetrating still deeper than those which had been taken off.

We have already remarked, that from under these sloughs, and from all parts of the ulcers covered by them, a thin acrid fluid is discharged, of so corrosive a quality as to excoriate or fret the skin of even the external parts where it is permitted to remain. In grown persons, where the upper parts of the mouth or throat are affected, this fluid frequently flows through the nostrils, and occasions blisters and sores on the skin of the upper lip; but this effect is most observable in children, the corners of whose mouths, or the cheeks of the sides on which they commonly lie, are often blistered, or stripped of the skin by this penetrating matter; and it is extremely probable, that many of the worst symptoms of the disease, such as the purging, vomiting, and faintness, are occasioned by the passing of this matter into the stomach and intestines; and this opinion seems to be confirmed by a common observation, that when the acrid fluid is plentifully discharged, either by spitting, or through the nostrils, the patient seldom suffers from the purging, vomiting, or faintness; but if the promotion of these evacuations is neglected, or if the patient happens to sleep longer than usual, these symptoms have come on with violence; which are indeed always more severe and dangerous where there is little or no discharge of this kind.

The constant use of gargles is therefore of the greatest importance, as they promote the discharge not only of the thick and glutinous matter which flows to the fauces, but likewise of a considerable part of the thin acrid fluid abovementioned; and the difficulty of using gargles effectually with children, is unquestionably one reason why they are more severely affected with this disease than grown persons; as they either prevent by their tongues the injection from reaching the seat of the complaint, or swallow the gargle and the putrid matter from the ulcers together; and thus the mischief extends beyond the power of art, and violent purgings, a mortification, and from thence discharges of blood ensue, which no power of medicine can stop, or any exertions of skill check, but the disease proves irresistibly and rapidly fatal.

In the mild state of the disease, where the symptoms are favourable, and the sloughs scarcely perceivable, or appearing very superficial, the gargle of sage leaves, wine, vinegar, and honey, which we have prescribed to be used in the inflammatory fore-throat, may answer the purpose here.

But in case the symptoms should be violent; if the tendency to putrefaction is apparently great; if the breath becomes offensive; and the sloughs large and deep; the following composition, varying the strength as to the contrayerva and myrrh, according to age and circumstances, will in general be found efficacious.

Take of the pectoral decoction, twelve ounces; and as it boils, add half an ounce of contrayerva root bruised: after boiling half an hour strain it off, and add white wine vinegar, two ounces—tincture of myrrh, one ounce—honey, six drams. Let the honey dissolve, and shake the whole well together.

Or the following gargle may be used—

Of the pectoral decoction, twelve ounces—of Virginia snake-root, two drams. Boil

these together half an hour, then strain, and add vinegar and tincture of myrrh, of each one ounce—honey, two ounces.

If the parts about the gullet are so affected, as to render it difficult or painful for the patient himself to make use of the gargle freely, a few spoonfuls of either of the above compositions warmed, may be often thrown on the parts affected by a small syringe; and this should by no means be omitted immediately before the patient swallows any food or liquids, in order to wash off as much as possible of the putrid and acrid matter which may adhere to the sores or ulcers, and prevent it's being carried into the stomach and bowels; and the use of the syringe is more necessary for young patients, who are prevented from applying the gargle to advantage, both by the soreness of the parts affected, and by the want of skill in using it.

After the disease has continued three or four days, or longer, a copious hæmorrhage, or discharge of blood, frequently comes on from the nose or mouth, but more commonly from the ears; and this is, at this stage of the disease, a dangerous symptom, proceeding probably from some branch of an artery destroyed by the mortification, and laid bare by the separation of the slough, as we have before observed; and if the vessel is large, this bleeding may prove fatal to the patient in a very short time, or if he should survive it, the loss of much blood at this time of the disorder may occasion future ill consequences.

This discharge, therefore, must be stopped with all possible expedition: if the patient is costive, stools must be immediately procured by clysters or suppositories; vinegar must be applied by means of tents, sponges, or otherwise, to the orifice of the bleeding vessel, or as near to it as it can be conveyed; the steams of this acid, made hot, should be conveyed plentifully into the throat and nostrils; the patient should either

either be taken out of bed, or supported in it, so as to be placed in a sitting posture, or his head should be raised if he is too weak to bear the motion of his body, and his upper parts should be kept moderately cool; his drink also should be acidulated with spirits of vitriol or tincture of roses.

As to medicines, the bark is principally to be relied on; it may be taken in substance with Port wine or claret, and in such quantities as we have already directed in other putrid cases, if the patient's stomach will bear it; if not, the following forms of administering it may answer the purpose.

Take of the decoction of the bark, one ounce and half—of syrup of saffron, two drams. Make a draught, to be repeated every third, fourth, or fifth hour.

Or, boil two ounces of bark grossly powdered, and four drams of Virginian snake-root, in three pints of water, till it is reduced to one pint. Strain it, and add two tea-spoonfuls of the elixir of vitriol, and give the quantity of a common wine-glassful every three or four hours.

If the heat should be intense, dulcified spirit of nitre, or Clutton's Febrifuge Spirit, should be added to the bark, and may be freely given in whatever the patient drinks.

Whilst the sickness and vomiting continue troublesome, mint tea with a little cinnamon, mixed with a third, or according to circumstances an equal quantity of Port wine, will be proper for the patient's common drink, and it may be also right to give a table-spoonful or two every hour of the following saline julep.

Dissolve one dram of salt of tartar in one ounce and half of new lemon juice strained. When the effervescence (or boiling) is over, add mint water and common water, of each one ounce—of simple syrup, half an ounce.

The steams of vinegar, in which myrrh

and honey have been dissolved, are recommended to be admitted into the mouth and throat, as hot as they can be endured, through an inverted funnel placed over a narrow-mouthed vessel; and this is by some preferred to gargles, though we are of opinion that both may be used to advantage.

Cataplasms of the bark grossly bruised, and camomile flowers boiled in vinegar, with the quantity of a grain and half or two grains of camphire added; laid across the throat, and renewed three or four times a day, not only soften the hardness and stiffness of the glands in the neck, but the vapour of this warm application, drawn in at the mouth with the breath, proves equally serviceable. In less emergent cases, flannels dipped in warm camphorated spirits of wine, mixed with an equal quantity of vinegar, may be applied quite round the neck.

A bath for the feet, made of the decoction of the bark and camomile flowers, with the addition of a third part of sharp vinegar, should be used twice or thrice in the day; if the patient's situation will not admit of having his feet placed in it, flannels wrung dry and applied warm to the lower extremities will afford relief.

If the application of blisters should occasion a strangury, or suppression of urine, it will be necessary to foment the belly with flannels dipped in warm water, or the last mentioned preparation of bark, camomile flowers, and vinegar; and gentle emollient clysters should be frequently administered.

Though the patient must by no means be exposed to the danger of taking cold, yet through the whole course of this disease care should be taken to admit fresh air at proper times, and under the guard of great caution; the room should also be kept perfectly sweet, and the air of it impregnated with aromatics and antiputrescents, by burning myrrh, lavender flowers, or rosemary, or by boiling them in vinegar, and

and conveying the steam into the apartment of the sick.

Nor is it sufficient that our care extends to the continuance of the disease, for when all the symptoms have disappeared some dangers remain; the check given to the purging in the course of it will often leave a costiveness, which must be removed by the mildest laxatives, such as rhubarb, senna, or manna.

Night sweats, languor, weakness of body, and depression of spirits, are some-

times the effects of the putrid fore-throat; in either of these cases the bark in substance, where the patient's stomach will bear it, may be taken in Port wine or claret; or if it disagrees in this way, a decoction of it acidulated with elixir of vitriol.

To these medicines must be added a moderate quantity of sound and generous wine; exercise on horseback, or in an open carriage, in fair weather; nourishing and restorative food, mostly of the animal kind; change of air; and, if necessary, asses milk.

CHAP. XVI.

Of Colds.

AS all *colds* are accompanied by a certain degree of fever, it may be necessary to speak of them in this place; but as obstructed perspiration is the occasion of colds, and as we have already in various parts of this work, not only endeavoured to point out the causes, and to describe the effects of these obstructions, instead of recapitulating the various symptoms of colds which are so generally known, we shall recommend the most obvious methods of avoiding, and the most simple means of removing them.

Extremes of heat and cold, a too sudden exposure to either, or too quick a change from the one to the other, will unquestionably check the perspiration, disorder the body, and bring on a degree of fever; but as each of those circumstances are sometimes unavoidable, human precaution can extend no farther than to lessen the ill consequences which may arise from them.

In order to this, it is in the power of every man to button his cloaths when he is to come into the air from a warm room, and to endeavour to keep up the heat of his

body on such occasions by moving faster than ordinary; and when he is obliged to enter a close room from the cold and open air, to keep at a distance from the fire, and approach it by very slow degrees.

Exposing the head uncovered to the fervid rays of the sun, or sleeping abroad under its immediate influence, may also in most cases be avoided.

Changing wet cloaths, and in particular stockings and shoes, is frequently neglected from no other cause than idleness or inattention; yet sitting in wet garments, and especially going near the fire in them, will scarce ever fail to produce a violent cold. The dangers arising from damp linen, beds, rooms, and houses, may in various instances be lessened by sleeping in the blankets, or with the cloaths on, even where we cannot escape from the inconvenience itself.

Yet, notwithstanding our utmost care, we are perpetually liable to obstructions of perspiration, and consequently to colds; for the treatment and management of which the following directions will in general be found sufficient.

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The symptoms which give us notice that we have caught cold, are in many respects similar to those which precede and accompany the attack of an inflammatory fever; such as oppression of the breast, pains in the head, disinclination to motion, and frequently heats and shiverings; but there are also other signs of a cold, such as a fullness or obstruction of the nose, a defluxion of rheum from the nostrils and eyes, and a disposition to cough, which are in general the first complaints, and where proper care is taken in the beginning, the only ones that appear.

When, from these symptoms, we are taught to believe that we have taken cold, and that the ill effects of it are approaching, the first step towards obviating danger and promoting recovery, is abstinence from our accustomed food and liquors: nor is this forbearance to be exercised with regard to the quality only; the quantity also is to be lessened, and instead of full meals of flesh and fish, and plentiful draughts of wine or other strong and fermented liquors, the patient must be contented with a scanty diet of weak broths or other spoon-meat, puddings, tarts, and biscuits; and for common drink, barley-water, baulm-tea, or the decoction of barley and tamarinds, with the addition of liquorice, directions for preparing which have been heretofore given; and all his drinks may be rendered agreeably acid by the juice of lemons, oranges, the infusion of tamarinds, or currant-jelly.

At night, white-wine whey will be very proper for those who have been accustomed to generous liquors; in other cases the same diluting drinks as are above prescribed ought to serve instead of supper.

On the succeeding morning let the patient remain in bed a few hours longer than usual, and encourage gentle perspiration by tea, barley-water, or any other diluting liquid; and if the sweating should grow profuse, he should be careful in leaving

his bed, and shift his linen, cautiously examining that what he is to put on hath been aired by the fire and made warm.

Under these regulations, we may venture to assert, that colds would very seldom continue troublesome above twenty-four hours; nor would they be attended with consequences which, for want of timely attention, soon become dangerous, and very frequently fatal; nor would coughs, inflammations of the breast and lungs, pleurifies, and consumptions, so often follow such slight colds, as might in the earlier stages have been easily conquered by a very short confinement to abstinence and regimen.

Many are the methods prescribed for getting rid of colds, some of them dangerous, and others absolutely desperate; one advises a cup of cold water at retiring to rest as a never failing specific, another recommends a debauch or a fit of drunkenness, and a third urges a sweat procured by violent exercise: but water does not agree with every constitution, and should any degree of internal inflammation have already taken place, might be productive of a disorder much worse than that which it is intended to cure; drunkenness will most probably expel the cold, by bringing on some violent fever; and the perspiration acquired by violent exercise, leaves the blood in a ferment, and the body exposed to a still higher degree of obstruction.

Of a piece with these experiments is the unaccountable and obstinate determination of some individuals, never to regard, or as it is usually termed, to *nurse a cold*; priding themselves in robust and hardy constitutions, they scorn to yield to the attacks of so despicable an enemy and persist in endeavours to shake him off, till he has got too fast hold of them to be easily routed; and when they are reduced to the necessity of being advised, they find, instead of a cold, some other disorder to encounter, which not only gets the better of their hardiness, but in too many instances

destroys the fabric which has been so very vainly and inconsiderately exposed.

Not that we would advise confinement and sweating on every slight occasion: over caution may in some instances be as productive of evil as neglect; and those who accustom themselves to take to their beds or rooms, and to promote perspiration by the use of diluting liquors on every suspicion of a cold, will bring on by degrees a general relaxation, which may render the habit so susceptible of colds, as to be scarce ever free from them. Those who are very apt to take cold should use constant moderate exercise, bathe in cold water, and take such medicines as increase the vigour of the circulation, and strengthen the whole system; and the disposition to take cold may in a great measure be lessened by gradually acquiring a habit of exposure to sudden changes of heat and cold. Nor will gentle exercise in dry weather, either in walking, on horseback, or in a carriage, be at all improper during the continuance of a cold; care being taken not to be out after sun-set, nor in a damp, moist, or sharp air.

But if the cold should resist the treatment and regimen which we have prescribed, it may be right to bathe the legs and feet in blood-warm water immediately before going to bed, drinking directly after a draught of wine whey, or some other diluting liquor; this method will often succeed in restoring the perspiration, when other attempts fail.

Should the cold notwithstanding continue, and the symptoms increase in violence; should the pulse become quick and strong; should the pain in the breast and the difficulty of breathing be augmented; and a dry skin, accompanied with much thirst, indicate the approach of an inflammatory or ardent fever; bleeding and a blister between the shoulders may be necessary, together with a frequent repetition of the saline mixture, and small doses of nitre and rhubarb, treating the patient in all respects as in the beginning of a slight fever.

By these measures, pursued in season, the complaints will in most cases be removed in three or four days; and symptoms which threatened a fever of a very serious nature, will generally give way to well-timed precautions, and gentle but early applications.

But above all things let heating possets of treacle, ale, and the like, and warm medicines to promote perspiration, be avoided; the disposition of the blood to fever does not require augmentation, nor will sweats produced by violence relieve: all that is necessary to effect the cure of the cold, is to take off the contraction of the vessels, and to restore perspiration; and this will more speedily be done by abstinence, moderate warmth, a little indulgence in bed, and diluting liquors, than by all the medicines in the apothecary's shop; the administration of which, when they are unnecessary, will answer no other purpose than to create an occasion for the use of them.

C H A P. XVII.

Of Coughs.

COUGHS are in general occasioned by colds, sometimes attending them as a symptom from the beginning, and at others produced by mismanagement or ne-

glect; in either case, the progress of a cough is troublesome, and the continuance of it dangerous, weakening digestion, destroying the appetite, and by degrees producing

ducing a general relaxation and bad habit of body, and frequently ending in hectic fevers or consumptions.

A cough is a violent expulsion of some kind of matter from the bronchia, or branches of the lungs, by means of a convulsive spasm or compression, and is always accompanied with a difficulty of breathing.

The regimen which we have prescribed in colds, must be still more strictly observed when they are attended with coughs; wines, spirits, malt liquors, and high food, must be omitted, and a light diet and diluting liquors substituted; a regular, moderate degree of warmth will also be useful.

Coughs are usually dry in the beginning, and in this stage may generally be removed by keeping the body open, promoting gentle perspiration, and chewing after every fit of coughing a small bit, to the amount of a scruple at a time, of the Peruvian bark.

But as the common remedies prescribed at the commencement of a cough are generally oily and sweet medicines, the digestion is soon spoiled, the cough grows moist, the breast is oppressed with tough and glewy phlegm, and it becomes necessary to apply to such medicines as may promote expectoration, and assist in throwing it off; and for this purpose the solution of gum ammoniac may be given in the quantity of a table-spoonful or two, according to circumstances, twice or thrice a day, or oftener if necessary.

The vinegar or oxymel of squills hath also been recommended in the following form.

Take of the vinegar or oxymel, one ounce—simple nutmeg water, one ounce—common water and balsamic syrup, of each four drams.

A table-spoonful or two to be taken three or four times a day, when the cough is most troublesome.

To make the vinegar of squills—

Take of such of the roots of squills as are plump, fresh, and full of a clammy juice, one ounce—distilled vinegar, a pint. Let it stand twelve or fourteen days, so near the fire as to receive a gentle heat; then strain it off, and add about an ounce of proof spirits.

For the oxymel—

Infuse an ounce of squills well bruised, for ten or twelve days, in a pint of distilled vinegar, near the fire; then strain it off, and add to the vinegar half a pound of honey, and boil till it becomes a syrup.

If the cough is violent, bleeding is necessary; but this operation should only be performed where the patient is young and of a strong constitution: and if a quick and high pulse indicate a considerable degree of inflammation: in weak habits, and where the patient is advanced in years, the loss of blood will prove injurious.

It may also be right to give a gentle emetic of ipecacuanha, if the phlegm separates with difficulty, or occasions nausea or sickness.

In these cases the following medicines, administered occasionally as the violence of the symptoms demand relief, will answer the purposes of keeping the body open, and allaying the irritation or tickling, which is often so troublesome as to prevent the patient from taking rest.

Take of the storax pill, six grains—of Rufus's pill, ten grains. Make a bolus with conserve of roses, to be taken going to bed.

Take of oil of sweet almonds, and syrup of poppies, of each one ounce—fine sugar, three drams. Make a linctus, and take a tea-spoonful when the cough is urgent.

Take of pure water, one ounce and half—of fresh lemon-juice, three drams—of salt of hartshorn, eight grains—of spermaceti, dissolved with yolk of egg, half a dram—of nutmeg water, three drams—of balsamic syrup,

rup, one dram. Make a draught to be taken every six hours, adding to that which is administered at night from five to fifteen drops of liquid laudanum, if the patient is restless.

When the defluxion is thin and acrid, softening medicines will be proper, and a decoction or infusion of the roots, leaves, and flowers of the wild or common mallow, or of the leaves of marsh mallows; colt's foot, or wild poppy leaves; may be frequently taken in the quantity of a tea-cupful, to which may be added, towards night, a tea-spoonful of the paregoric elixir.

To make the paregoric elixir—

To half a pound of the volatile aromatic spirit, or spirit of sal volatile, add of the flowers of Benzoin, or Benjamin, two drams—of opium sliced or scraped, one dram. Infuse for five or six days, shaking the bottle well three or four times a day, then let it settle, and strain off.

The Spanish infusion is also recommended.

Take an ounce of Spanish juice, commonly called Spanish liquorice—of salt of tartar, three drams. Pour on these ingredients a quart of boiling water; let them infuse twelve hours, then strain off, and add an ounce of the syrup of poppies.

This is also called *Fuller's Infusion*, and the quantity of a small tea-cupful, given two or three times a day, will assist in relieving the cough; the English juice of liquorice is in all respects as good as the Spanish.

Lozenges of various kinds may also be kept in the mouth occasionally, as well as the common barley-sugar, or sugar-candy; in particular, fruit lozenges will be found useful in loosening and promoting the discharge of the tough phlegm, without bringing on a loathing, sickness, and disagreeable fulness of the stomach.

Occasional drains or evacuations will

prove serviceable in tedious and obstinate coughs; for this purpose, setons, issues, or blisters, may be opened as circumstances shall direct; if the habit of body should forbid the application of the latter, a plaster of Burgundy pitch may be substituted, which should be placed between the shoulders, and taken off and wiped every three or four days, renewing it at the end of fifteen or twenty days, or sooner if appearances bespeak a necessity for it.

Hitherto we have treated of such coughs as are commonly attendant on colds, and the usual consequences of neglecting to take early care of them; but there are also coughs which are the common companions of particular disorders, and others which occur without the ordinary symptoms of colds, and which appear to be themselves original diseases; though, perhaps, some of these are also occasioned by obstructed perspiration, and the other causes of taking cold.

Symptomatic coughs we have already considered under the different heads of *consumptions*, *worms*, *teeth*, and other disorders on which they are frequently attendant; and farther notice will be taken of them in the subsequent parts of this work, as they accompany other diseases.

Of such coughs as appear to proceed from causes either remote from, or not absolutely dependant either on colds, or other disorders, it may be necessary to give some account.

Coughs are sometimes occasioned by a foul or weak stomach; and this may be discovered by observing, that though the cough is extremely troublesome, yet it is not particularly excited by drawing the breath, which never fails to produce disagreeable consequences in that cough, the seat of which is in the lungs.

The cure of the cough which proceeds from a foul stomach, must be effected principally by cleansing and strengthening medicines, in vomits and purges suited to age,

age, constitution, and circumstances; the former may be of ipecacuanha, or the antimonial or emetic wine; the latter should be of the bitter kind; and *tinctura sacra*, or the sacred tincture, may be given in small doses, not exceeding two table-spoonfuls, every day, or even twice a day, so as to keep the body moderately open, by procuring two or three stools in every twenty-four hours.

To make the sacred tincture—

Infuse two ounces of *hiera picra* in a quart of strong white wine. Let it stand six days, shaking the bottle frequently, then pour it off fine.

The following is the composition of *hiera picra*, or the holy bitter.

Take of the gum of succotrine aloes, four ounces—of Winter's bark, one ounce. Mix and reduce them to a very fine powder.

Coughs which arise from weakness of stomach require the bark, which may be either taken in substance, in a decoction, or in tincture prepared as follows.

Take of Peruvian bark in powder, two ounces—of Virginia snake-root, half an ounce—Seville orange-peel and cinnamon bruised, of each half an ounce—of proof spirit, a quart. Infuse the whole a week in a moderate warmth, then strain or pour off fine.

Of this tincture an ounce may be taken once or twice a day, mixed with an equal quantity of simple cinnamon water.

If a cough is nervous, which may be discovered by it's being accompanied with cramps and twitches, not only of the breast and stomach, but even in some cases of other parts of the body, such treatment will be necessary as in the slightest attacks of a nervous fever, though change of air, gentle exercise, and opiates administered in moderate quantities, will frequently be found sufficient to remove it. If the spasms are vio-

lent, bathing the lower extremities in warm water will sometimes give immediate relief: in almost every case the Thebaic tincture, or liquid laudanum, is the best opiate that can be offered; in this it may be taken, in quantity from ten to twenty drops, once in the twenty-four hours.

There is also a disease which seems to differ from other coughs, being occasioned by causes somewhat different, and exhibiting symptoms which do not attend other kinds of this disorder.

This is the *catarrhal cough*; or, when it assumes a very inflammatory appearance, the *catarrhal fever*; which is most common in cold situations in the spring and autumn, and in very changeable weather, and generally attacks persons of a particular conformation of body; such as those who are narrow-chested or long-necked; those who are subject to coughs, or are of lax, phlegmatic, or weakly constitutions.

Catarrhs are described as of two sorts, the *hot* and *cold*; the former when the symptoms at the beginning of the disease are inflammatory, and it commences with a degree of fever; and the latter, when no considerable inflammation occurs at all, or not till the disorder is advanced. These catarrhs may proceed from an increased secretion of matter on the membrane of the nose, occasioned by some check given to the perspiration, from hot and spicy diet, spirituous or fermented liquors, or from any violence of the passions of the mind.

But there is also a third catarrh, which may be attended with a very vehement cough, and which is usually called a *suffocating catarrh*; and this is either produced by the rupture of an abscess in the lungs; by a palsy of the nerves, which serve the purposes of breathing; or by a polypus or coagulation of blood in the vessels of the lungs.

The symptoms of the *hot catarrh* are redness, soreness, and heat in the eyes and eye-lids, together with a sense of stretching

the skin of the latter as if they were swelled; the tears flow involuntarily, and are of so acrid a quality, as to inflame the cheeks as they run down; the nose seems stuffed, and the nostrils swelled; the voice is altered, and the sense of smelling impaired; and in proportion to the degree of inflammation, a thin matter flows through the nostrils, which occasions sneezing, and is sharp, acrid, and corroding; the rheum separated in the nose, windpipe, or lungs, inflames those parts; the nose and even the whole face is puffed up, and the patient complains of languor, heaviness, deafness, and soreness of the ears; the tonsils of the throat and the adjacent parts are red, hot, and sore; and a secretion of watery matter occasions a constant tickling troublesome cough; in some instances the whole mouth is sore, the tongue fretted in different parts, the glands are tender, and a constant spittle flows, which inflames and chaps the lips: these symptoms, or such of them as occur, are generally more troublesome towards night, but abate in the morning, on the approach of a gentle breathing sweat. In weak habits, the pulse is sometimes quick but not strong, the appetite is lost, and the complaints in the evening are more aggravated.

In the *cold catarrh* the secretion of matter comes on first with a running from the nose; this matter is not watery, or of so acrid a quality, but rather of a glewy consistence; as this passes into the throat it produces a cough, by which it is endeavoured to be thrown off, and sometimes a nausea and inclination to vomit; the expectoration is most considerable after sleeping, but it occasions no particular soreness or stuffing of the nostrils: after some days inflammatory symptoms appear, but seldom violent, and the matter becomes more thick and glutinous; as the disease proceeds, it grows yellow, and then the symptoms generally abate, the phlegm returns to a whitish colour, decreases in quantity, and so the disorder goes off.

The *suffocating catarrh*, where the lungs are affected, produces a soreness and tightness on the breast; pains in that part or in the side; a great difficulty of breathing, and a vehement cough without expectoration, occasioning head-ach, sickness, and disposition to vomit.

The regimen must be adapted to the different appearances of the disease; when the symptoms are inflammatory, heating diet and liquors must be carefully avoided, and the use of light food, with diluting liquors, must only be permitted: if the patient should be low, or the pulse languish, wine whey may be allowed; but upon the whole he should rather live low than the contrary, and a moderate degree of warmth is in these diseases necessary.

Bleeding may be of use according to age and strength of body, with moderate laxatives, and gentle perspiration; after purging, mild opiates may be given at night, joined with a small quantity of the tartar emetic; and if the pain in the breast is violent, it may be right to apply a blister as near as it can be conveniently placed to the part affected; the feet may also be bathed in warm water at night, which may relieve both the head-ach and cough; and if the inflammation is not considerable, the following pill may be taken.

Of the saponaceous, or soap pill, three grains—
—of sweet almonds blanch'd, ten grains—
—of emetic tartar, two grains. Make six pills,
one of which may be taken every eight hours.

In old catarrhs, and coughs of long continuance, purgatives should be frequently used, together with opiates, in such proportions as not to lessen the efficacy of the laxatives; for this purpose—

Take of Rufus's pills, fifteen grains—of the
soap pills, eight grains. Make three pills,
one to be taken occasionally.

When the cough is intense, and occasions internal soreness of the breast or stomach, pectoral drinks, such as linseed tea, infusion of the leaves of marsh mallow, and
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the like, may be taken to advantage; and softening mixtures with spermaceti may also be used, as prescribed in coughs occasioned by colds.

Persons who are subject to catarrhal complaints, must be extremely careful of relapses, which are very apt to happen from

imprudent exposures to the air, neglect of medicine, or the omission of warm cloathing; in these cases the patient will probably go through all the symptoms afresh in a degree of aggravation, when his strength is exhausted, and he is unable to support the conflict.

CHAP. XVIII.

Of Inflammations.

INFLAMMATION is an increased circulation of the blood from irritation, and may be either external or internal, partial or universal.

Inflammations may be occasioned by bruises, wounds, sprains, dislocations, sudden and violent colds; spicy, hot, or stimulating diet; excessive use of spirituous liquors; and the like: and the principal effects of inflammations are heat, pain, swelling, redness, a quickened pulse, a dryness of the skin, and itching.

The divisions and sub-divisions of inflammations are too numerous to be specified; yet, like the different kinds of fever, they are all but inflammation under various different circumstances.

In some cases inflammation soon goes off, in others it is removed with difficulty, and it very frequently ends in other diseases; but it can only be carried off by a removal of the immediate cause, which is the irritating matter; and it is generally said, that by whatever means it is produced, it must either terminate in resolution, (or dispersion) suppuration, or mortification.

The first method is in most cases desirable, especially if the degree of inflammation be inconsiderable, and the patient in other respects healthy: and for this purpose the patient must submit to a proper regimen; bleeding, purging, and other evacuations,

must be procured by art; and the efforts made by the natural discharges should be carefully promoted. When the seat of the inflammation is in the skin, saturnine applications will be proper, such as Goulard's Vegeto-mineral Water, as also vinegar and spirits of wine, or vinegar and oil, and such other soothing and cooling medicines as will neither increase the swelling, the hardness, the pain, or the heat.

Suppuration, or the formation of matter, is properly rather a consequence of inflammation than a mode in which it may be said to terminate: when any quantity of blood falls into a cavity during the continuance of inflammation, it ferments and becomes matter; this afterwards communicates the fermentation to the solid parts adjoining, and gives occasion for the conversion of those into similar matter, and the inflammatory symptoms then abate.

In the operation of this fermentation, the fever will be considerable, the humour or abscess will increase in size, and the progress of it will be accompanied with heat and a violent throbbing pain. When these symptoms denote the forming of matter, all attempts to dissolve or disperse the inflammation should be laid aside, and the ripening should be promoted by poultices till it either bursts and discharges of itself, or is in a fit state to be opened by caustics, or the lancet.

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The approach of a mortification may be discovered by the appearance of the inflamed parts; which assume a livid or dark purple colour, and the skin becomes full of blackish pustules; that which is adjacent is pale or of a copper colour; the swelling decreases; the flesh seems loose; and a sinking pulse, and cold sweats, foretel speedy mortality.

In these cases the bark, as an internal medicine, is the only known specific; but it should not be given indiscriminately: in weak and feeble habits it cannot be improper; but where symptoms of inflammation occur, and the body appears to be in that state, it should be administered with great caution, and not without being accompanied by nitre or mineral acids.

For external applications the following is recommended.

Take simple lime-water, one pound—camphorated spirit of wine, three ounces—spirit of sal ammoniac, half an ounce. Mix these ingredients, warm the mixture, and wash the parts with it frequently.

To make the lime-water—

Take of quick-lime, one pound—of water, one gallon and a half. Pour the water on gradually; and after the ebullition or boiling is over, let the lime subside, and the liquor be filtered through paper.

Cataplasms or plasters are also to be applied, such as the cumin plaster, London treacle, or lye and bran.

When the increase of the mortification requires that the part should be scarified, a warm antiputrescent fomentation of wine, camphire, camomile flowers, the bark, and the like, should be applied warm immediately after the operation; and it may afterwards be dressed with basilicon and oil of turpentine, and bladders of warm water may be laid over the dressings, and renewed as the water grows cold.

In all inflammations, the body should be kept open; internal ones are considerably relieved by the frequent use of clysters; and vapours and warm baths will also contribute to the removal of these complaints.

Upon the abatement of the inflammation, guaiacum, saffrafrs, and other attenuating or softening medicines, may be used to advantage.

CHAP. XIX.

Of Inflammations in the Eyes and Ears.

AN inflammation in the eye, called also *ophthalmia*, affects the membranes which invest the eye, particularly the conjunctive, being that which makes the white of the eye; it is extremely sensible, and abounds with blood-vessels, which are very visible in inflammations; it covers so much of the eye as is called the *white*, and lines the two eye-lids, preventing any thing from falling into the orbit or circular cavity in which the eye is placed.

It is almost impossible to enumerate the various kinds of this disorder, or the numberless accidents and circumstances by which it may be occasioned.

It may proceed from any internal cause whatever, capable of exciting inflammation; or from external blows, bruises, or other injuries; from sparks of fire flying into the eye; from insects, lime, ashes, or dust, blown into it; an excessive degree of light; exposure to the sun; stedfastly looking at any

any object, and particularly snow or any thing white; writing or reading a great deal by candle-light; approaching too frequently large fires or other intensely heated bodies; exposure to severe flashes of lightning; the glitter of metals or fire-arms; and, in short, whatever refracts the rays of light, and throws them more strongly than usual on the pupil.

Inflammations in the eyes may also proceed from excesses in eating, drinking, or the indulgence of the passions; from accidental growth of hairs in the eye-lids, which sometimes turn inward and hurt the eye as if it was pricked with a pin; from wood fires, to those who are unaccustomed to them; and from melting metals and minerals.

This complaint in some cases arises from habit of body; such as scrophulous or scorbutic humours, taints of a venereal nature, and even from gout.

It sometimes also proceeds from imprudently stopping old drains or evacuations, and from drying up violent eruptions in the head or face, or running ears; and these complaints frequently follow the small-pox and other eruptive diseases.

Whole families and neighbourhoods are often affected with it at the same time, from whence it may seem to be epidemic and infectious; but the prevalence of this disorder at particular times and places may more probably be owing to damp and moist air, to rainy seasons, or to low unwholesome situations.

An inflammation in the eye is attended with all the usual inflammatory symptoms; such as swelling, hardness, or stiffness; redness, pain, itching, smarting, and heat; the light is offensive; all objects appear through a kind of mist, and particular forms seem floating in the air before the eye; scalding tears burst from it, and flow in considerable quantities; and the arteries in the temple throb violently.

When this complaint is of long conti-

nuance; when it is accompanied with a violent pain in the head, and especially over the temples; when the forehead itches, and the patient falls into profuse night sweats; great danger may be apprehended, even to life itself; at least it brings on dimness, specks, and sometimes total loss of sight. Slighter inflammations, and such as are occasioned by accidental injuries, are seldom either of long continuance, or attended with any disagreeable consequences. Nature sometimes relieves these disorders by a voluntary diarrhoea, by a hæmorrhage or bleeding from the nose, or by the bleeding piles; and it frequently shifts from one eye to the other in a few hours, in which case it is of no very obstinate kind, nor of long duration.

All inflammations of the eye are attended by a certain degree of fever, more or less violent according to the symptoms and the patient's constitution and habit of body; the pulse is in most cases strong and quick; and if the complaint continues many days, thirst, costiveness, a foul tongue, and restlessness or want of sleep, are not unusual.

In the course of this disorder all heating, spirituous, and spicy food, must be avoided; a cooling liquid diet will be necessary; a forbearance from all violent exercise must be enjoined, and the mind should be kept quiet as well as the body; the room in which the patient sits should be darkened; he should avoid the fire, and whatever may promote coughing, sneezing, or other agitation of the head; and he may wear a shade over his eyes of pasteboard covered with dark green, brown, or black silk.

Bleeding is the first step to be taken towards a cure; the quantity of blood taken away must be proportioned to the quickness and hardness of the pulse, and to the age, constitution, and strength of the patient: if this bleeding can be effected in the jugular vein, it will be the better, and from eight to twelve ounces may be drawn; but if the vein of the arm is opened, leeches should

also be applied to the external corners or angles of the eye.

As soon as these operations are performed, which must be repeated if the inflammation continues obstinate, a cooling purge should be given of manna, senna, rhubarb, or the like; and small doses of Glauber's salts may be repeated every day if necessary, so as to produce three or four stools in every twenty-four hours, till the violence of the symptoms abate. It will also be right to drink freely of diluting liquors, and particularly at going to rest, in order to excite perspiration, which will very considerably contribute to relieve the pain, especially if the patient's legs and feet are first bathed in warm water.

Blisters, issues, and setons, are also advisable; the former should be placed either on the temples, behind the ears, or on the fore part of the head, the hair being previously cut off, and the part shaved; and these blisters should be kept open as long as the inflammation continues, or even some time after it's disappearance, to prevent a return.

Issues should be made in the arm next the eye which is most affected, and setons may be fixed under the jaw in case one eye only is inflamed, or under the chin if both suffer; these drains are, however, but seldom necessary, if blisters are applied in season, and the discharge from them continued: some recommend a seton between the shoulders, as preferable to any other evacuation of the kind.

Bathing the eyes with warm milk and water, is serviceable in slight attacks; but if the pain is intense, cataplasms or poultices of white bread and milk laid over the eye may afford relief.

Goulard's vegeto-mineral water is highly recommended by some; beginning with it weak, and increasing it's strength as the eye becomes habituated to the use of it: whether the inflammation is scrophulous, cancerous, or erysipelatous, this water is

said to be of singular efficacy; as also when it proceeds from blows, bruises, or other external injuries.

When the disorder begins to give way, and after bleeding, purging, and other necessary evacuations, the common collyrium or eye-water is useful to cool the part, and stop the defluxion, and may be made as follows.

Take of white vitriol, broken into small pieces, from one scruple to one dram. Dissolve it in two ounces of water, shake it well, then filter through paper.

Begin to use the weakest first, and proceed to the stronger by degrees. Dip a fine linen rag in it, and touch the eye-lids gently several times a day, and particularly at going to bed.

When the humour is thick, and forms a dry scurf about the eye; and when small membranes begin to form in the corners, which sometimes happens after the small-pox and measles, a grain of blue vitriol may be dissolved in an ounce of water, and applied as above.

The following mixture is also recommended.

Take of camphorated spirit of wine, three drams—of rose water, two ounces. Shake them well together.

But this should by no means be used when any considerable defluxion of a hot acrid quality attends the inflammation, with redness or itching, as it will increase the symptoms.

When the eye has almost been deprived of sight and sensibility, and the inflammation has been deep, violent, and dangerous, *warm camphorated spirit of wine* mixed with the *Peruvian balsam* hath produced very favourable effects; but it should be observed, that the quantities of camphire used should be very moderate; for, though weak solutions of it abate the inflammation, larger proportions will operate in a way quite contrary.

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Any cooling liniment, containing a small quantity of opium, may be used, and will contribute to lessen the inflammation; and when the humour that is discharged from the eyes is apparently sharp and corroding, they may now and then be washed with a thin solution of gum Arabic, or the mucilage or jelly of boiled quince seeds.

If the eyes should remain weak or tender, after the disappearance of the inflammation, a curd made with alum boiled in milk, may be spread thin on a linen rag, and applied over the eyes by way of cataplasm, or they may be frequently washed with the following mixture.

Diffolve a dram of alum in half a pint of water; add the white of one egg, and beat all well together.

And bathing in the sea or the cold bath are recommended to compleat the cure; if neither of these can be conveniently used, washing the head every morning with cold water, or pouring water upon it, will be beneficial.

Others advise cold water, with the addition of a small quantity of brandy or vinegar, as strengthening and restorative to the sight after violent inflammations: and direct that the whole eye be immerfed in one of those mixtures, which may be done by means of a small bason, or wide glass filled to the brim.

When films attend or accompany defluxions on the eyes, or when the transparency of the cornea, or external coat of the eye, is impaired, the following remedy is said to be of great use.

Take of best borax, half a dram—of white sugar, one dram—of rose water, two ounces. Mix them well together, and drop a small quantity frequently into the eyes, or into that which is affected.

The common solution of vitriol will generally remove pimples, which are apt to attend these inflammations; if this should

fail of success, and matter should form in them, open them with the point of a lancet, and wash the part with the collyrium or eye-water last mentioned.

When the inflammation has been occasioned by blows or bruises, and a blackness remains about the eye, wash it frequently with the following mixture.

Take of distilled vinegar, two ounces—of spirit of sal ammoniac, half a dram. Shake them well together.

If the inflammation of the eyes proceeds from gout, it will hardly be removed till that disease is brought into the extremities; when that happens, the complaint in the eyes will vanish of course; but if it should be violent, it will be necessary to bleed and purge with aloes; and in that case the eyes should be washed with warm water, adding as much brandy as the patient can endure.

When a scrophulous habit hath occasioned the disorder in the eyes, the Peruvian bark is the only sovereign remedy; the body should be kept moderately open, the head washed every morning, and the bark taken in substance three or four times a day, or if that should disagree it may be given in the following form.

Take two ounces of Peruvian bark powdered, and half an ounce of Winter's bark; boil them in two quarts of water till it is reduced to one; add as it boils an ounce of liquorice root sliced, let it settle, and then strain or pour off fine.

Two, three, or four table spoonfuls, according to age and strength of constitution, may be given twice, thrice, or even four times a day; the effects, however, of this medicine are slow, and still more so in this way than taken in substance; but a cure of this disorder, and a palliation of the other scrophulous symptoms, may be expected from persevering in the use of it; if nitre to the quantity of a scruple be also administered twice a day, it will assist the operation.

tion of the bark, and be found efficacious in this as well as common inflammations of the eyes: during this course of the bark, the patient must be indulged in a more generous manner of living, and allowed to drink small quantities of wine, diluted or not as circumstances may direct.

Æthiop's mineral hath also been recommended in obstinate inflammations of the eyes, whether occasioned by scrophulous or venereal taints; but in the administering mercurials great caution is necessary, and we cannot advise the use of them, but under the directions of persons of knowledge and skill: alteratives, or medicines which correct the humours, may be applied with much more safety; but in venereal cases, the vitriolic water must by no means be tried; purging, the warm bath, and in some instances bleeding in the foot, have been found useful; and linen rags dipped in water and brandy, and laid over the eye, will procure immediate relief.

To avoid the returns of this troublesome disorder, those who are subject to it will do well to abstain from high living, much wine, and spirituous liquors; to be regular in all respects, and in particular to avoid exposure to damp, moist, or sharp air, and especially that of the night.

Inflammations in the *ear* affect the whole membrane which lines the internal part of it, and which is extremely sensible and full of nerves.

It may be occasioned by colds; a check of perspiration, by going into the air without a hat or other usual covering; by sitting with the side of the face against crevices in the wainscot; or by any of the other causes which commonly bring on inflammation.

It may also be produced by foreign bodies getting accidentally into the ear, such as pins, worms, flies, or the like, or by a faulty quality in the wax; it sometimes also happens that the diseased matter in acute disorders passes to the ear, and occasions inflammation and deafness.

The symptoms of this complaint are at first a kind of pricking, shooting, or gnawing pain: this increases to a degree of violence; the glands swell and throb exceedingly, especially if there is any tumor or tendency to matter, and the whole side of the face seems affected with a great weight.

As the pain increases, it is generally accompanied with a fever, restlessness, and watchfulness, and sometimes brings on fainting, delirium, and even convulsions.

If the inflammation is occasioned by a cold, the head should be kept warm, and the patient should live low, and endeavour to promote gentle perspiration by drinking freely of diluting liquors; if, notwithstanding, the disorder should gain ground, it may be necessary to bleed; to open the body with Glauber's salts, repeated as circumstances may require; and bathing the lower extremities in warm water will be useful; he may also take about a scruple of nitre twice a day, and rub behind his ears with the volatile liniment, or apply blisters there. Gentle opiates should be given at night to procure rest.

If the pains proceed from living insects which may have crept into the ear, the smoke of tobacco may be blown into it, or a small quantity of olive oil dropped in; the latter will infallibly destroy the insect, or oblige it to come out: hard bodies can rarely be extracted without the assistance of a surgeon, and then with extreme difficulty.

In case of suppuration, and when it cannot be prevented, fomentations from the steams of hot water, or bags filled with emollient herbs boiled, may be applied to the ear; or bladders filled with any warm liquid may be laid over them, and renewed as they grow cold; the best way of receiving the steam into the ear, is from the spout of a tea or coffee-pot: if the abscesses break, and matter is discharged, inject warm water and soap, or water and honey of roses.

C H A P. XX.

Of Inflammations in the Intestines.

OF all the diseases to which we are liable, scarce any is attended with greater pain or danger than that of which we now treat; yet it is frequently brought on by unpardonable neglect, either of the patient himself, or of those who are called upon to advise and assist him.

It may be occasioned by the same causes as produce other inflammations; such as colds arising from obstructed perspiration, extremes of heat and cold, and sudden changes from one to the other; exposure to damp and moist air, or that of the night; or by the repulsion or striking in of the pustules in any eruptive disease.

An inflammation in the bowels may also proceed from hardened excrement, or other substances, such as stones of fruit, or the like, lying in the intestines; from a reduplication of one intestine in another; from medicines of violent operation; from poisons; and from ruptures, wounds, and other external injuries.

It is also called the *illiac passion*, the *enteritis*, and is known by several other denominations descriptive of the parts affected; but as the treatment is precisely the same, in whatever part of the intestines the inflammation is seated, we shall confine ourselves to the name which comprehends the whole intestinal canal, and proceed to speak of the symptoms of *inflammations in the bowels*.

These are commonly a shivering, and an acute burning pain in the belly, which generally fixes in the part where it is first perceived; in some cases this pain remits and returns with additional violence, but in general it continues in an increasing degree; the whole belly is at the same time affected with spasmodic pains, or contractions, extending to

the loins; and windy complaints are frequently extremely troublesome.

The pulse is small, quick, and hard, the extremities grow cold, and the patient feels a sudden and uncommon loss of strength; sometimes a watery purging in small quantities attends this disease, but in most cases the muscular fibres of the inflamed part are so strongly contracted, that nothing can pass through, though the patient feels frequent occasions; and even the passage of the anus, or fundament, is so shrunk, that it will hardly admit a clyster-pipe.

The windy complaints are sometimes accompanied with nausea, sickness, reaching, and vomiting; the tongue is dry and foul; the thirst intolerable; the urine either extremely pale or very high-coloured, and discharged with heat and great difficulty; the breathing is quick and obstructed: as the spasms or contractions become violent, the patient bends his body forward, and endeavours to compress or squeeze his belly together; his face is flushed, a delirium comes on, and his sufferings end in convulsions.

But inflammations in the bowels frequently terminate in mortification: and in that case the pain goes off, and the patient apprehends himself relieved; but his countenance grows pale, the under-lids of his eyes become livid, the extremities are cold and clammy, yet the pulse continues quick though small, and for the most part irregular, foetid stools are discharged; and in this case also, a delirium and convulsions finish the melancholy scene.

So rapid is the progress of this disease, that where no means are used to stop it, death frequently follows in twenty-four
3 K hours,

hours, and generally within three days from the seizure, so that there is rarely time for matter to form and suppurate; but should that happen, the pains will abate, or rather be converted into a sense of distension, and of great weight, and irregular fits of heat and cold, sickness, and other symptoms of an internal abscess, will take place, whilst the contraction of the belly will go off, and the pulse will become less quick; when this abscess bursts the patient generally faints, and on his recovery the weight seems considerably relieved.

In this disease, when the pain does not seem fixed, but shifts to different parts of the intestines, if the vomiting is only occasionally, and if the clysters are returned downwards, hopes may be entertained of the patient's recovery.

But when the vomiting is continual; when not only what is taken down, but even the clysters and the excrement itself is discharged at the mouth; if the patient is extremely weak, his pulse fluttering, his countenance pale, and his breath offensive; his case is extremely dangerous: and a total abatement of pain, a small and irregular pulse, cold and clammy sweats, and black or foetid stools, are certain signs that a mortification hath commenced, and that death will very speedily follow.

The strictest care must be observed with respect to regimen; nothing hot or stimulating, either of food or liquors, should be permitted; the patient's diet should be simply water-gruel, barley-gruel, or the like; and the liquids he swallows, clear whey, or the infusions or decoctions of the wild mallow, marsh mallows, liquorice, or other emollient herbs and vegetables. Cordials of every kind, wines, and spirits, must be avoided; the least indiscretion in this particular will infallibly produce fatal consequences.

Bleeding is absolutely necessary on the first attack, nor must we be deterred from this operation by the smallness of the pulse,

or the apparent weakness; the pulse will rise, and the strength return, as the inflammation diminishes; and the bleeding must be repeated till the pulse becomes soft, at such distances, and taking away such quantities, as the strength, habit of body, and situation of the patient, may direct.

A blister should be applied to the seat of the pain immediately after bleeding; it generally gives the patient ease, and not only promotes the return of the clysters, but occasions the medicines taken at the mouth to pass downwards.

The frequent repetition of cooling laxative clysters must by no means be omitted; oatmeal-gruel or barley-water, with a table-spoonful of olive oil, will answer the purpose, and should be given every third or even second hour till they take effect; fomentations and baths of warm water, or infusion of camomile flowers, should be applied to his belly; and the flannels may be sprinkled with camphorated spirit of wine after they are wrung out; the lower extremities should be repeatedly bathed in warm water, and bladders filled with it be laid over the navel, and just below it: if the patient's whole body can be conveniently placed in a warm bath, it may probably procure relief; but great care must be taken that he is not exposed to cold in taking him out of it and returning him to his bed.

The smoke of tobacco conveyed into the bowels, will sometimes procure a passage when all other remedies and applications fail; and this may be blown from a tobacco-pipe, or a bladder may be filled with it, and injected as a clyster; and bladders of warm water should be applied to the soles of the feet.

Though the contraction of the inflamed part seems to forbid the use of purges, yet when other means fail of procuring a passage, they must be tried, but opiates must be also at the same time administered; the common bitter purging salt will probably answer the purpose of opening the body,

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in this case, as well as any other medicine; two ounces of it may be dissolved in a pint of warm water, and given in two or three spoonfuls at a time, according to circumstances, till a passage is procured; but to prevent it's being thrown up as it is swallowed, twenty or twenty-five drops of the Thebaic tincture, or liquid laudanum, in simple cinnamon or pepper-mint water, may be given after every dose, lessening however the quantity of the laudanum if the dissolved salts are obliged to be repeated often.

But if no liquid will stay on the patient's stomach, the following pills may be given.

Take powdered jalap, and vitriolated tartar, of each half a dram—opium, one grain—Castile soap, enough to make pills. Form the whole into four or six, which must be taken at once, and repeated in a few hours if they do not procure stools.

Acids will also contribute to stop the vomiting, and give such medicines as are taken at the mouth an opportunity of operating; and for this purpose lemon or orange-juice should be mixed with whatever liquids the patient takes in.

The following draught is also recommended, to prevent the purging medicines from returning in case the vomiting is severe, but the use of it is not adviseable till all other means fail.

Take of emetic tartar, from one third of a grain to two thirds of a grain—of poppy syrup, from two drams to six—of simple mint water, two ounces.

In desperate cases quicksilver hath been commonly given, to the quantity of many ounces; nay, in some instances, to the weight of a pound: and if the stoppage is occasioned by hardened excrement, or from any other solid body remaining in the intestines, no other remedy can be used so likely to succeed in removing it; but great

care must be taken to observe, that no symptom appears by which it may be judged that a mortification hath taken place, and that so large a quantity is not administered as to drag down the bottom of the stomach, and prevent the quicksilver from getting into the bowels.

We have also heard of plunging the legs and feet of the patient into cold water, or of placing him upon a cold and wet pavement, and throwing water against his lower extremities; but as we have never seen the experiment tried, we cannot speak of it's success: if it hath ever been practised, we apprehend it must have been in the moment of despair, and when every other effort of art hath been unavailingly exerted; in such situations it may be allowable to grasp at even the shadow of hope.

When inflammations of the bowels are occasioned by ruptures, it will in most cases be necessary to have recourse to a skilful surgeon; but if no such is at hand, the patient may be placed on a table or sofa, with his lower parts raised, and his head in a declining posture, and an attempt may be made to replace the intestines by the hand; but force must be carefully avoided, as it will increase the inflammation, and put the patient's life in immediate danger: should these endeavours succeed in any degree, fomentations should be immediately applied, and such clysters as we have before prescribed must be frequently administered.

Swift as this disease is in it's progress to danger, the recovery from it is extremely slow, and for a considerable length of time doubtful; it is, in far the greater number of cases, occasioned by inattention to the very consequential circumstance of keeping the body open: persons in health should never suffer themselves to want a stool twenty-four hours; by this means hard and indigestible substances which get into the intestines would be voided before they became surrounded with coats of fæces or hardened

hardened excrement, and formed into masses difficult of expulsion; and after an escape from the perils of this disease, it behoves us to be doubly careful in this particular, as relapses are generally fatal, which is indeed too often the case in the original attack. To this care of avoiding coltiveness must be added, every precaution against taking cold, which may prove equally dangerous; the patient must also regulate his diet strictly, neither indulging in high or

seasoned food, or in heating, spirituous, or fermented liquors; he must shun every species of excess, and desist from every violent exertion both of body and mind: and observing these absolutely necessary rules, he may hope to regain his strength, and re-establish his health; though he must not forget, that having once suffered in this disorder, the least deviation will subject him to the return of all the pains and dangers of it.

CHAP. XXI.

Of Inflammation of the Stomach.

THIS disease is also called *gastritis*, and *inflammatory cholic*; and is occasioned by nearly the same causes as the inflammation of the bowels, except those of the reduplication of the intestines, and of the hardened fæces or excrement: it is a disorder of the most acute kind, and requires the most powerful means of relief to be immediately employed, lest it should terminate in an abscess, and from thence in mortification, which will be inevitable death.

The symptoms are also, for the most part, similar to those which attend an inflammation of the intestines; and the stomach may be known to be in an inflamed state by a fixed, pungent, and burning pain in it, accompanied with a throbbing, a sense of distension as if it was blown up with wind, and a tumor or swelling; the pain is augmented by swallowing either liquids or solids, and however mild, soft, or easy of digestion; and whatever is taken in brings on sickness or nausea, and excites vomiting, purging, or hiccups; the breast and stomach are perpetually uneasy; swallowing and drawing the breath are attended with difficulty; and coughing, sneezing, hiccuping, or any other agita-

tion occasions violent pain; the pulse is small, yet quick and hard, and in some cases irregular and intermitting; the extremities are cold; and clammy sweats and fainting fits generally denote the most dangerous consequences.

The symptoms of an *inflamed stomach* are sometimes mistaken for those of a very violent heartburn, or of an inflammation of the liver; but the difference may be discovered by consulting the descriptions of these complaints.

The regimen must be precisely the same as has been directed for inflammations of the intestines; and the same care is necessary to avoid cordials, and whatever is of a heating or acrimonious quality; nor must any liquids be swallowed cold, or in any degree of warmth above that of milk from the cow.

The same method of cure which we have prescribed for inflamed intestines, may be generally followed in this disease, with this difference, that the irritated state of the stomach will seldom admit of administering medicines internally, and that we must therefore depend principally on bleeding, which must be governed, both as to quantity

tity of blood drawn and repetition by the pulse, which will in general rise after this operation, the strength of the patient, and the violence of the inflammatory symptoms; blistering the part affected, which should by no means be omitted; and clysters, in which may be conveyed manna or other gentle laxatives, if the patient should be costive: and if no sustenance can be kept on his stomach, the clysters may be composed of chicken water, or thin chicken broth, which may help to support and nourish him; nitre should be also given in the clysters, and the patient's common drink should be acidulated with currant-jelly, or a small quantity of nitre may be added to it.

Nor must we neglect to apply bladders of warm water, or fomentations of the emollient herbs to the stomach, and the former to the soles of the feet; but neither must be used too hot, or suffered to continue till they grow cold.

If this disorder should have proceeded from swallowing poison, or from an excess of eating, it may be proper to venture on a gentle emetic; but in all other cases it is attended with extreme danger.

If the pain is violent, and the vomiting cannot be checked, it may be right to try the effect of an anodyne in some such form as the following.

Take of the solution of gum Arabic, half an ounce—of pure nitre, from five to ten grains—of water, one ounce—of syrup of marsh-mallows, two drams—and from two to five drops of liquid laudanum.

And this draught may be repeated as the patient retains it on his stomach, and as circumstances direct, at the distance of three, five, or six hours.

If an abscess should form on the stomach, and burst, a milk diet is strongly recommended, with a dram or thereabouts of the genuine balsam of capivi, to be taken twice or thrice a day in a draught of the milk.

We cannot dismiss this chapter, without exhorting our readers to pay early attention to the attacks of this disease: taken in time it frequently admits of a cure; but after it has been suffered to gain ground, it is seldom or ever got the better of, at least not without suppuration, which too often proves only a temporary relief, obtained too with extreme pain, and under very disagreeable circumstances. Nor is less care necessary in the going off of this complaint than in that of inflamed intestines; the reasons for which, as well as proper rules for management, will be found in the preceding chapter.

CHAP. XXII.

Of an Inflammation of the Liver.

THE liver may be inflamed in different parts, in the membranes only, or in both the membranes and substance; and it is generally apprehended, that the inflammation commences in some of those parts which are contiguous to the liver, and is from thence communicated to it.

This disease may not only arise from the

common causes of internal inflammation, but from the antecedent state of the body, or of the liver itself; if the former is uncommonly fat, or the latter scirrhous or affected with hard and warty tumors, these circumstances may excite inflammation, especially if the liver in this state has been irritated by strong vomits; or it may

be occasioned by the state of the blood, if it is dry or abounds with choler.

When the seat of inflammation is the membrane, the pain is generally acute, and resembles in some measure that of a pleurisy; but, when the substance of the liver is inflamed, the pain which is felt there is not at first violent, but increases gradually as the disorder advances, shooting up to the top of the left shoulder, and sometimes about the collar-bone, and into the throat; which latter is considered as a determinate symptom: if the attack is not accompanied with a great degree of fever, which is sometimes the case for the first two or three days, the pulse suffers but little alteration; but when the swelling becomes large, or when the convex part of the liver is affected, when a tumor or swelling is externally visible, and occasions a cough and difficulty of breathing, the pulse grows quick; and in those cases the patient cannot lie on the left side without additional pain.

When the concave part of the liver is affected by the inflammation, in proportion as it approaches or is distant from the stomach, it brings on hiccups, sickness, vomiting, and thirst, in a greater or less degree of violence; if it is near the gall-duct, and prevents the passage of the bile into the intestine which is called the *duodenum*, symptoms of jaundice will appear; in all cases where the liver is inflamed, the quantity of bile thrown into the duodenum is increased, and of consequence all the evacuations will be bilious.

If this disease is properly treated at the beginning, it is not often mortal; but if the swelling cannot be dispersed, and a supuration ensues, unless the matter can be discharged externally, it proves fatal, by bringing on an incurable hectic fever.

The regimen must in no respect differ from that of other inflammatory disorders described in the two foregoing chapters; all heating food and liquors must in this case also be avoided; the former should consist principally of light spoon-meat, and the

latter of such drinks as are cooling and diluting; and the patient should, in like manner, desist from all exertions which may tend to disturb his body or mind.

From the mildness of the symptoms in the beginning of this disease, few complaints are in general made till it hath proceeded several days; if, however, it should happen to be noticed in the first four or five days, bleeding will be necessary, and if this operation does not cause a speedy abatement of the symptoms, it must be repeated; but this, as well as the quantity to be taken away, must be determined by the strength of the patient, his habit of body, and other circumstances, regard being had to the caution already given in treating of other intestinal inflammations, not to be deterred from bleeding by the smallness of the pulse, if other symptoms indicate the necessity for it.

After bleeding, the application of a blister, large enough to cover the part affected, will be adviseable, and the body should be kept gently open by small doses of the tartar emetic and rhubarb in powder, or rather by an infusion of tamarinds, Glauber's salts, or manna; but no violent purgatives must be administered: emollient clysters will also be found useful, and bladders of water or fomentations to the side, as in other inflammatory cases; to which may be added bathing the lower extremities in warm water, and applying it in bladders to the soles of the feet.

Nitre may be also added to the patient's common drink, as in the like complaint in the stomach or bowels; in this disorder it may be peculiarly serviceable, as it tends to promote the urinary secretion.

When the above means fail of success, and symptoms of suppuration become apparent, the bark has been recommended to be taken in substance three or four times a day, beginning with small doses, and increasing till an ounce of the powder is taken in twenty-four hours.

If the abscess actually forms, all methods should

should be tried to direct it to an external discharge, and for this purpose ripening poultices or cataplasms should be constantly applied; and if from it's being immovable the liver appears to adhere to the *peritoneum*, or membrane which lines the whole belly, the suppuration may be hastened by increasing the quantity of the bark, even to two ounces in twenty-four hours, if the patient's stomach will bear it, and in those cases the abscess may frequently be opened externally with success.

But though the same methods must be pursued, the like good effects can hardly be expected, if from the appearance of the stools it is evident that the abscess hath burst, or the discharge from it made it's way into the cavity of the belly; in that case death will most probably ensue, unless the efforts of nature should, as it some-

times happens, avert this extremity of danger, by carrying off the matter in the urine or stools.

If, notwithstanding all endeavours, this disease should terminate in a schirrhous tumor or tumors on the liver, little more can be done towards the relief of the patient, than the same care which is required in hectic fevers, or other cases of the same kind. He must be confined entirely to a diet of vegetables, milk, and whey; and of the former, grass roots, endive and succory are to be preferred; he must abstain from animal food and strong liquors, use very gentle exercise, and neither fatigue his body or agitate his mind: under such regulations, though little expectation of recovery can be formed, his life may be prolonged many years, without much pain or inconvenience.

C H A P. XXIII.

Of Inflammations of the Muscles of the Belly and of the Kidneys.

IT requires some observation to distinguish this first-named complaint from the inflammatory cholic, inflammations of the liver, or any of the adjacent internal parts; yet it may in general be known by it's being superficial, and by an extraordinary degree of soreness over the surface of the belly.

Inflammation of the muscles of the belly, is generally accompanied with more or less of fever, and may be occasioned by the same causes which produce other inflammatory disorders; by a pressure of the belly in leaning against a table or the like, or by the rheumatism fixing in these parts.

If there is an apparent swelling and hardness, and a throbbing continued pain, it may be apprehended that an abscess is forming, which should be encouraged with

all speed by poultices and cataplasms, and an external discharge if possible procured; if the matter should be discharged inwardly, it is in most instances fatal; and a tendency to mortification, which sometimes appears, is equally to be dreaded.

To prevent a suppuration should therefore be the great object of our care; and as this can only be done by removing the inflammation, bleeding and purging will be immediately necessary, together with all such applications as are recommended in other external inflammations, and under the same management with respect to food and liquors.

Inflammation in the kidneys, is a disorder happily not very frequent, but as it sometimes occurs, we cannot wholly disregard it.

The causes of this inflammation may be wounds,

wounds, bruises, abscesses, or tumors, and whatever forcibly conveys the thicker parts of the blood into the urinary ducts; such as running or riding violently, excessive heat, extraordinary efforts of the body, or the like.

The inflammation begins with a pungent burning pain in the back, near the articulation of the short ribs, but higher on the left side than on the right, often darting down to the bladder, and even the testicles; the fever is more or less violent according to the other symptoms; the urine at first red, but it afterwards in most cases becomes pale, and is discharged with pain, heat, and great difficulty; the side in some instances appears red and inflamed externally; the leg and thigh, but particularly the latter of the diseased side, is seized with a numbness; all the pains are increased by any motion of the body which tends to disturb the kidney, or to extend the parts which surround it; standing, walking, lying on the opposite side, and every change of posture, is disagreeable, and the only ease the patient can obtain is by reclining on the side affected: as the disease gains ground, pains are felt in the groin; the pulse becomes quick, small, irregular, and sometimes intermittent; and coldness of the extremities, clammy sweats, sickness, vomitings of bilious matter, fainting fits, sour eructations, delirium, and convulsions, denote present danger.

If the complaints continue to increase till the seventh or eighth day, the numbness of the part remaining, and the patient is then seized with shiverings or chillness, it may be apprehended that matter is forming in the kidney, and that the disorder will terminate in an abscess.

If the matter, which in these cases generally suppurates early, should be discharged into the cavity of the belly, it will be attended with great danger; and even an external discharge of it frequently produces an ulcer, the cure of which is extremely uncertain.

This disorder may go off, by being transferred to some other part of the body; or if the urine grows high-coloured, is secreted in large quantities, and at last becomes still more copious, thick and mixed with matter, the patient may gradually obtain relief, and the cure be effected in this way.

This disorder may also end in mortification or a schirrhous; if the former, it may be known by a sudden abatement, or almost total remission of the pain, without any discoverable cause; by cold and clammy sweats; a low pulse, irregular and intermitting; violent hiccups; a suppression of urine, or a discharge of it in very small quantities, and those foul, seeming full of hairs, stinking, livid, or black, together with an almost universal deprivation of strength; this unhappy case admits of no relief. The schirrhous can hardly ever be removed; but with great care, and under a strict regimen, the danger is less immediate.

Inflammations of the kidneys require the same regimen, and generally the same treatment, as other internal inflammatory complaints.

Bleeding is necessary, and the repetition of it, in such circumstances, and under such regulations, as in cases of inflamed liver, bowels, or the like: emollient laxative clysters should also be frequently thrown up; and the patient may derive ease from sitting over the steam of warm water, and by fomentations of emollient herbs, and bladders filled with the same decoction, applied externally to the part affected, and particularly if the skin appears inflamed.

Decoctions of parsley roots, or of linseed, mixed with an equal quantity of the Arabic emulsion, will be proper for the patient's common drink, which may be rendered palatable, by adding a little currant-jelly, or lemon-juice and sugar.

To make the Arabic emulsion—

Take of sweet almonds, an ounce—of bitter almonds, a dram—of the mucilage, or jelly of

of gum Arabic, two ounces—of water, a quart. Blanch the almonds, and beat them in a marble mortar, adding the water and mucilage by little and little whilst the almonds are beating.

In the disease of which we now treat, a double quantity of the mucilage of gum Arabic may be added.

If a suppuration should take place, which may be discovered by the abatement of the pain, by a remaining sense of weight about the parts, by shiverings and heats alternately, and by urine of a disturbed appearance and whitish colour, the treatment must be similar to that of the like event in the liver; and after the abscess has burst, the patient should drink plentifully of marsh mallows tea, or of a decoction from the roots of the same plant.

The following balsamics are also recommended after suppuration.

Take of white sugar, three drams—of powdered rhubarb, one dram and half—of nitre, one dram—of Canadian balsam, one ounce

and half. Make an electuary, and give a tea-spoonful, more or less according to circumstances, three times a day.

Or, take conserve of red roses and white sugar, of each three drams—of powdered rhubarb, one dram—of pure nitre, two scruples—of the balsam of capivi, one ounce and half—of syrup of marsh mallows sufficient to form the whole into an electuary; to be taken as the last prescribed medicine.

After each dose of either of these electuaries, the patient may swallow a draught of the emulsion abovementioned.

But we are rather inclined to advise the use of the bark than these balsamics, and that in substance, beginning with small doses, and increasing the quantity as the patient's stomach and strength will admit; if the bark in substance disagrees, a decoction must be substituted, though it's operation is neither so speedy or efficacious: when this disorder does not advance rapidly, whey, butter-milk, and the constant use of chalybeate waters, are said to be beneficial.

CHAP. XXIV.

Of Inflammation of the Bladder.

THIS disease is produced by the same causes which occasion other internal inflammations, and in a great measure by such as bring on the like disorder in the kidneys.

The symptoms are, a fever, a pressing and burning pain in the bottom of the belly; and sometimes, though the pain is seated deep, yet the skin about this part will assume an inflammatory appearance: if the neck of the bladder is affected, a retention of urine will take place, accompanied with a constant inclination to discharge it; and if the bottom of the bladder is

diseased, the urine will continually dribble away, though the patient will make frequent efforts to throw out larger quantities, which seem to be contained in the bladder: the like perpetual occasion of going to stool also attends this disorder; the gut seems loaded with hardened excrement, and should it actually become so, the pains are augmented; the pulse is quick and hard; the extremities cold and clammy; and as the disorder increases, the usual symptoms of irritation come on, such as restlessness, anxiety, sickness, nausea, vomiting, and delirium.

This disease is generally hasty in it's progress, and soon terminates in recovery or death.

In the former case, the disorder may pass off by an increased secretion of *mucus*, or that slimy matter which covers the membranes, from the membrane of the bladder; it may be transferred to some other part of the body, or a suppuration may take place: if the latter happens, the matter may be discharged into the cavity of the bladder and be carried away with the urine, or it may fall into the cavity of the belly, where it generally proves fatal; the matter may also be discharged externally through the *perinæum*, being that part which adjoins the fundament towards the fore part of the body; but these ulcers are extremely difficult of cure.

The regimen, as in all inflammatory disorders, must be low, the food light and thin, and the drink cooling and diluting; every thing that is of an acrid or heating quality must be avoided, and all agitations of the mind should as much as possible be prevented, as they tend to heat and inflame the body.

Bleeding will be necessary, and must be repeated if the symptoms require, and the habit of body permit it.

Relaxing medicines must be administered early, and repeated as often as necessary; for, unless powerful means are speedily exerted, death will very soon render them useless.

For this purpose give from two to four grains of the antimonial powder, the quantity being proportioned to age, strength, and other circumstances, every two hours, washing it down with a saline draught of the common preparation.

To make the antimonial powder—

Take of emetic tartar, two grains; reduce it to a very fine powder, and mix it well with half a dram of the compound powder of crabs claws. This medicine should be

made in small quantities at a time, as it spoils in keeping.

The compound powder of crabs claws is prepared as follows.

Take of the tips of crabs claws prepared (or levigated) four ounces—of prepared pearls, and red coral prepared, of each one ounce. Mix them well.

Laxative and cooling clysters will also afford relief; or if, from the situation of the disorder, these cannot be administered, gentle purges of the same quality, consisting of manna, Glauber's salts, decoction of tamarinds, or the like, should be given, and repeated so as to keep the body moderately open.

In case of the retention of urine, decoctions of marsh mallows, and other mucilaginous herbs should be used freely; and if, notwithstanding the evacuations, the contraction and violent pains should continue, two or three drops of liquid laudanum may be now and then added to these drinks, and particularly towards night.

If the inflammation should appear externally, an anodyne emollient cataplasm may be applied and covered with a bladder of warm water, which latter should be renewed as it grows cold; but if there is no such external appearance, it will be right to excite it by rubbing the parts about the bladder and the *perinæum* with the volatile liniment.

Fomentations and the warm bath will also be useful; the oftener the latter can be repeated, even two or three times a day, the greater will be the relief obtained from it.

It may be necessary to add a caution to such of our readers as may be afflicted with this disorder themselves, or may be about other persons who are so unhappy as to labour under it, against the indiscriminate or unskilful use of instruments in order to draw off the water; even the catheter must be introduced

troduced with abundant care; but attempts to remove imaginary obstructions from the urinary passages by probes or the like, are in general productive of the most fatal con-

sequences: such force always adds to the inflammation and increases the danger; nor are strong diuretics of turpentine and such other medicines much less pernicious.

C H A P. XXV.

Of Inflammations of the Periosteum.

THE *external periosteum* is the membrane which covers the bone, and separates it from the flesh; the *internal periosteum* is the membrane which lines the cavity of the hollow bones, and separates the bone from the marrow which it contains.

Besides all the other common causes of inflammation in different parts of the body, it may be occasioned in these membranes by the venereal disease and the scurvy; by the former when the internal membrane is affected, and by the latter when the external periosteum is inflamed.

The symptoms that the external membrane is the seat of the inflammation, are a deep-seated pain and extreme heat, accompanied sometimes with a pulsation or throbbing; the pain is augmented by pressure, and every muscular motion adds to it.

When the internal membrane is affected, pressure occasions no increase of pain, nor does the motion of the muscles produce any disagreeable sensation; but the pain continues without being aggravated or relieved by any position of the diseased part, the pain constantly attending, which is like splitting the bone from within.

But as inflammations in both membranes proceed from nearly the same causes, so they produce the same effects with regard to the parts of the bone to which they adhere, terminating in both cases either in abscess or gangrene, with this difference

only, that if the internal membrane is affected and mortifies, it destroys the whole bone and marrow of the part.

If these inflammations are not very quickly removed, the bone will receive injury, and the periosteum upon the diseased part being destroyed, cannot be renewed till so much of the bone as is affected exfoliates or scales off; in the mean time, the parts of the flesh which lie on it being irritated by an acrid humour, malignant and often incurable ulcers are produced, especially if it happens where the bone is covered with much flesh, and an incision cannot be made with safety.

The cure must be attempted by a regimen and treatment similar to those prescribed in other inflammatory cases: in this, bleeding repeatedly will be necessary, together with stronger purges than are allowable in such inflammations as affect the intestines; and the patient should live low, and drink plentifully of diluting liquors with acids.

But as a suppuration near the bone is greatly to be dreaded, all our endeavours, when matter is actually formed, must tend to draw the disorder to the external parts; and for this purpose fomentations and ripening poultices must be applied; for the former a decoction of emollient herbs may be used, and for a poultice the following.

Take of the root of white lily, two ounces
—figs and onions bruised, of each half
an ounce—yellow basilicon ointment, one
ounce

ounce—gum galbanum, two drams—linseed flour, as much as is necessary. Boil the figs and lily roots in water till the latter are tender, then bruise them and add to the other ingredients so as to make a soft cataplasim of the whole: the galbanum must be first dissolved with the yolk of an egg.

But in this and most other cases where ripening or softening poultices are necessary, bread and milk boiled smooth, with the addition of oil sufficient to keep it soft, and if required a little raw or boiled onion cut fine, will save much trouble, and perhaps answer the purposes for which they are applied as effectually as those which are composed of a much greater number of ingredients.

To make the ointment called yellow basilicon.

Take half a pint of olive oil—yellow wax, yellow resin, and Burgundy pitch, of each half a pound—of common turpentine, one ounce and half. Melt the wax, resin, and pitch, in the oil over a gentle fire, then take it off and add the turpentine, and strain the whole whilst it remains hot.

But if neither fomenting or poultices will draw the matter towards the surface, so as to admit of it's being discharged by means of a superficial incision, it may be necessary to cut down through the flesh to

the bone, if the disordered part is situated so as that such an operation can be performed; if this cannot be attempted, amputation will be inevitable.

There are also various other parts of the human body, both external and internal, which are subject to inflammation, such as the joints, the thighs, the spleen, the heart, the pericardium, the mesentery, and several others; but as the causes are principally the same as those of which we have already treated, and the methods to be used for the removal of these disorders nearly alike, it will be unnecessary to dwell upon them. The first great attention in all inflammatory cases is to reduce the symptoms by bleeding, low diet, and a free use of diluting liquors, avoiding every thing both of food and drink which is strong or heating; and if to these directions be added fomentations and warm baths, as often as they can be used with convenience, no farther prescriptions will be necessary, but what may be found in the foregoing chapters on the subject of different inflammations.

Inflammatory disorders peculiar to the *female sex*, such as those of the *breast*, the *vagina*, and the *uterus*, or *womb*, will be considered in that part of our work which concerns *the treatment of women in childbirth*.

CHAP. XXVI.

Of the Colic.

THIS is an appellation given indiscriminately to all pains in the belly or gripings; but it is with greater propriety denominated differently, according to the different causes of it and the different circumstances which attend it: the treatment and method of cure must also vary of course, and each species of the disease

will therefore require to be considered distinctly.

When an obstinate costiveness and a vomiting of bile accompanies the pain in the bowels, it is called a *bilious colic*; if it is attended with violent rumblings in the intestines, and eructations, it is denominated a *flatulent or windy colic*: in that species of colic

colic which is said to be *hysteric*, the spirits are remarkably depressed, and the matter vomited up is generally greenish; and the *nervous colic* principally affects those labourers and artificers who are exposed to the fumes of melted metals or minerals. And this is the disorder which has also taken the name of the *Devonshire colic*, and hath been attributed to leaden vessels, conceived to be employed in preparing cyder; a very false and mistaken idea, as no such are ever used in the management of that liquor: and this colic may also be properly termed the *spasmodic colic*.

Persons of weak and tender constitutions, those who lead sedentary lives, and such as are frequently exposed to the dangers of getting wet in the feet, are most liable to the colic; though it attacks persons of all ages and habits; and the whole region of the intestines, or any part of it, may be the seat of this disorder.

Various are the causes by which this disease may be occasioned: the *bilious colic* may be produced by extraordinary agitations of the mind, by acrid and stimulating matter falling on the bowels, by the bile or other excrementitious matters being retained too long, or having otherwise lost the qualities of health. The *flatulent or windy colic* may arise from obstructed perspiration, from hard improper food, or from new or fermented liquors. And the *nervous colic* may be caused, as has been already observed, by the fumes of metals or other poisonous matter inhaled with the breath, or by solutions of them in the various vessels which are commonly employed for the purposes of the kitchen; it may also be occasioned from gouty matter diverted from its original seat to the intestines, by worms, or by the obstruction of periodical or other usual evacuations: and this colic seems also in many instances to be of the bilious kind.

But from whatever cause this disorder arises, the approach and progress of it are

nearly alike: it begins with a dull pain, more like a sense of pressure or weight, just about the pit of the stomach; and this is attended by loss of appetite, a pale or yellowish cast of countenance, a sickness or nausea, and costiveness. As the disease proceeds, the pain increases gradually, is felt in different parts of the belly, but at last fixes about the navel, from whence it seems to shoot and dart in different directions, and wherever it is felt, leaves behind it extreme soreness; the sickness at the stomach advances with the pain, and at length brings on a vomiting, and frequently of bilious matter; the urine is lessened in quantity; and a *tenesmus*, or constant occasion to go to stool, accompanies the other complaints.

In the bilious colic, the pulse is in some cases strong and quick, and the appearances of heat and thirst denote fever; the urine is sometimes pale, and at others deep; the belly seems to throb and beat, and is frequently cold; the vomiting becomes by degrees so frequent as to be almost continual; quantities of hot, yellow, bitter bile, are thrown up, yet this discharge brings no lasting relief; and the disease frequently terminates in the illiac passion, or inflammation of the bowels.

The flatulent or windy colic, proceeding frequently from colds or the obstruction of perspiration, may be removed in general by whatever tends to restore it; such as rubbing the legs and feet with warm flannels, or immersing these extremities in warm water; the discharge of wind may also be promoted by clysters of the common composition, by small doses of the tincture of rhubarb, and by frequent draughts of camomile tea, with a few drops of oil of mint in it.

When this complaint proceeds from somewhat improper of food or liquor, such as fruit, vegetables, sour or new malt liquor, or the like, some persons recommend a dram of any good spirits, and others,

with perhaps more propriety, a glass of peppermint water: the dangers of bringing on inflammatory disorders in the intestines should always deter us from applying spirituous liquors in any considerable quantities as remedies for this disease; we apprehend opening medicines of a composition tolerably warm, and external applications of warm flannels or cloths, and the bath for the legs and feet, or heated bricks applied to the latter, would in general be much more safe and effectual.

For the purge—

Take of the infusion of fenna leaves, two ounces—of tincture of fenna, half an ounce—dissolve in the infusion half an ounce of Rochelle salts. Give one half, and if this fails to produce stools in two hours, let the patient take the remainder.

Or the following—

Take tincture of rhubarb and simple cinnamon water, of each one ounce—of the aromatic tincture, two drams. Make a draught, to be taken at once.

If the pains are so violent that the patient can obtain no rest, and where the suppression of urine is considerable, the following anodyne hath been recommended.

Take pure water, one ounce—oil of almonds, three drams—nutmeg water and syrup of marsh mallows, of each two drams—of the Thebaic tincture, or liquid laudanum, from five drops to twenty, according to circumstances.

Persons whose digestive powers are weak, are most subject to frequent returns of the flatulent colic; and to such we would recommend the following medicine, not only as a preventive, but as a powerful and speedy relief in colical pains proceeding from wind or indigestion: in the former case it may be taken to the quantity of a table-spoonful, either in mint water, or in an infusion of orange-peel in common water;

when the pains are violent the quantity may be somewhat increased.

Infuse an ounce of Columbo root powdered, in a pint of good French brandy; let it stand seven days, then pour it off fine.

In the *nervous colic*, the cure should begin by cleansing the stomach with camomile tea; or, if necessary, with the assistance of a few grains of ipecacuanha.

After the stomach is washed out, opiates should be given, in doses proportioned to circumstances, and in particular to the violence of the pain; but they must be repeated every two or three hours until they procure sleep and some degree of ease: the apprehension that opium occasions the palsy, which frequently succeeds this disease, seems to be erroneous.

Take of pure water, one ounce—of the Thebaic tincture, or liquid laudanum, twenty drops (more or less)—of simple syrup, two drams. Make a draught, to be taken immediately, and repeat it every two or three hours, as circumstances may demand.

Or, make a pill of one grain of opium, more or less, according to age, strength, and the symptoms; and repeat as before.

If the pain refuses to yield to the laudanum swallowed, the following clyster may be administered, and repeated till it gives relief.

Take of olive oil warmed, four ounces—of liquid laudanum, from thirty to forty drops.

And a plaster of the following composition may be applied to the patient's belly, about the navel.

Take of *theriaca Andromachi*, and of *species aromaticæ*, of each two drams—of expressed oil of mace, one scruple. Make a plaster.

As soon as the pains are abated by the use of opiates; gentle purges, and such as operate

operate with the smallest irritation should be given; such as—

Common infusion of fenna, one ounce—bitter purging salts, two drams—syrup of ginger, one dram and half. Make a draught, to be repeated every two hours till it takes effect.

But where castor oil can be procured, it is certainly preferable, both on account of the certainty of it's operation, and because it will not require to be so frequently repeated.

Take of castor oil, (mixed with yolk of egg) one ounce—peppermint water, half an ounce—nutmeg water, two drams. Mix, and make a draught.

If the castor oil is not to be had, one dram of cream of tartar, or half a dram of precipitated sulphur, may be given every hour or two until stools are procured; and when a passage is once obtained, laxative medicines must still be continued till all danger is removed.

One ounce in powder of the Columbo root, infused a short time in boiling water, suffering it to settle, and then pouring it off fine, may be of use to check the vomiting, and relieve the sickness, in the beginning of this disease; and it is said that the smoke of tobacco conveyed into the bowels hath occasioned stools, when all other means have been tried unsuccessfully.

The paralytic complaints which frequently remain after the removal of this colic, are in general relieved by the use of the Bath waters; but those whose circumstances and situation will not admit of this remedy, may use an embrocation, composed of Barbadoes tar dissolved in rum, to rub the spine at least twice every day; and for the like purpose any strong spirits or aromatic oils may also be applied in the same manner: after this disease the bark, and exercise on horseback, may be necessary to restore the patient's strength, which generally suffers considerably.

In the *bilous colic*, if the pulse is full, and the pains violent, accompanied with fever, it may be necessary to begin the cure by bleeding; but this must be directed, as well as the quantity of blood to be taken away, by the strength and situation of the patient.

It may also be necessary to order emollient clysters, and diluting liquors to be taken plentifully; these may be acidulated with lemon-juice, cream of tartar, or tamarinds; and gentle laxatives, such as manna in thin chicken broth, or the like, may be frequently administered.

Warm baths are strongly recommended by some, and by others they are thought to be rather injurious than beneficial; certain it is, that they afford temporary relief, but this seldom continues; and until the bowels are evacuated of the offending contents, it can hardly be expected to be lasting.

If in this colic the vomiting should be violent, and other attempts to restrain it prove ineffectual, saline draughts, given in the act of effervescence, or during the boiling which the mixture occasions, may be of use, but a few drops of liquid laudanum should be added to each draught; and a plaster of Mithridate or Venice treacle, or the leaves of garden-mint boiled in Port wine, may be applied to the pit of the stomach; and clysters with Venice treacle, or from twenty to thirty drops of liquid laudanum in each, may be frequently injected.

When a passage hath been procured, the bowels emptied, and the pain abated, the following draught is recommended.

Take of simple mint water, one ounce—of spirituous cinnamon water, half an ounce—of fresh lemon-juice, half an ounce—salt of wormwood, and the cordial confection, of each a scruple—syrup of saffron, one dram. Make a draught, to be taken every eight hours, and add from five to twenty drops of liquid laudanum if the pains continue troublesome.

The Bath waters, and exercise on horseback,

back, are advised as contributory to the restoration of health after this disease.

The *hysterical colic* in some instances resembles the bilious colic, beginning with violent pains in the stomach, accompanied with excessive vomitings of yellow or green matter, and a great depression of spirits; women, and those of gross or relaxed habits, are most liable to the attacks of this disease, the pain of which sometimes goes entirely off for many days, and then returns with increased violence: a difficulty of breathing sometimes attends this disorder, and in other cases the jaundice; which, however, seldom continues many days, but vanishes of its own accord, and without the assistance of particular medicines.

Bleeding, purging, and all other evacuations, are said to be prejudicial in this species of colic, except in cases of very sanguine habits, or robust constitutions, where it occasions a considerable degree of fever; yet if the vomiting should continue violent, it may be necessary to wash out the stomach with whey, carduus tea, small posset, or the like.

After the stomach is cleansed, small doses of liquid laudanum may be taken in any simple water once every four, six, or eight hours, or to the quantity of twenty or twenty-five drops, to be repeated at the end of twelve hours.

Or the following—

Take half an ounce of manna, and dissolve in two ounces of water—add of oil of almonds, half an ounce—of liquid laudanum, ten drops. Make a draught, to be repeated every six hours.

Asafætida in pills is also recommended, and tincture of castor to the quantity of a tea-spoonful in a glass of the infusion of pennyroyal.

But the use of opiates must be continued till the symptoms are entirely gone, increasing the distances between the doses; and after the removal of the disorder, the

stomach and bowels may be strengthened, and the restoration of health completed, by the bark and aromatic bitters, taken in proper quantities daily, the patient at the same time enjoying the benefit of good air, and moderate exercise on horseback.

To prevent colical complaints, those who are subject to pains in the bowels should avoid as much as possible agitations of the spirits and violent exertions; should be careful not to expose themselves to northern blasts of wind, or to extreme and sudden vicissitudes of heat and cold; they should keep their feet warm and dry, or change their shoes and stockings immediately, in case of their accidentally becoming wet; they should abstain from windy food and spirituous liquors, and from all excess either of eating or drinking: those who are by their employments subjected to the fumes of lead, or to the influence of any preparations from that metal, should eat fat and oily food, or even take a table-spoonful of oil in the morning before they enter on the business of the day, with which some recommend the mixture of a small portion of brandy, or other spirits; and all those who have once suffered in either of the different colics which we have described, should guard against returns, by taking the earliest precautions, keeping the body open by laxatives and emollient clysters, applying fomentations and bladders of warm water, and bathing the legs and feet, on the first notice of any complaint in the bowels. In the first stages of these disorders they may very frequently be removed under such management, but suffered to proceed, they soon possess themselves of the vital parts, too strongly to be expelled; and we may venture to say, that more lives are sacrificed to inattention and neglect in these disorders, than in any other class of those numerous maladies by which the complicated and tender frame of the human machine is liable to be discomposed, disordered, and destroyed.

C H A P. XXVII.

Of the Cholera Morbus, or Purging and Vomiting.

THIS disease is more frequent in autumn than any other season of the year, and more commonly attacks young persons than those who are farther advanced in life; and those of a bilious, dry, and choleric habit, are more subject to it than moist, phlegmatic, or sanguine constitutions: close, sultry, hot weather, seems also to favour the approaches of this disease, which are in general extremely violent, the progress rapid, and the event more fatal than almost any other disease, the plague excepted.

It proceeds from a redundancy of the bile, overflowing in considerable quantities, and descending from the stomach into the bowels; and this may be occasioned by food or liquors of unwholesome quality, or which disagree with the stomach, and in particular high salted, dried, or spiced meats, and cold, windy, or watery fruits; it may also proceed from particular medicines, which in some instances act as poisons on certain constitutions; from actual poison; from eating mushrooms, mussels, or the like; and in some cases from excess in the passions of the mind.

The seizure is generally sudden, and the first symptoms are sickness, heart-burn, wind, and pain and distension of the belly; these are soon followed by frequent and violent vomiting and purging of bilious matter, green, yellow, or of a blackish colour; violent pains and gripings now rack the bowels; the pulse is quick and small, or unequal, and the patient complains of thirst, heat, and anxiety; cold and clammy sweats appear, particularly in the extremities, which are also cramped or contracted by excruciating spasms: as the disease advances, these contractions affect the muscles

of the belly, and even of the whole body, and the pain becomes almost insupportable; perpetual though ineffectual strainings to vomit, and unceasing urgings to stool, bring on hiccups, a lividness of the nails and below the eyes, and in twenty-four hours, or even sometimes a shorter space, the disease terminates with life.

The first step towards a cure, in the early part of the disease, is to wash out the stomach with plentiful draughts of diluting liquors, such as herb teas, whey, water-gruel, or the like; but very weak chicken broth is preferable to any other drink for this purpose, and at the same time clysters of it should be frequently administered.

To this evacuation may succeed a decoction of oat or wheaten bread, (though the former is said to be preferable) toasted till it is of a dark brown colour without being burnt, and boiled in water till it takes the colour of the bread; and this will in general remain on the stomach, and check the violence of the vomiting.

If the symptoms are not violent, a small quantity of tartar emetic, from a quarter to half a grain, may be given in any of the drinks, and repeated after three or four hours; but this must be omitted where the vomiting is continual, or the patient strains much. If the vomiting is moderate, from twenty to thirty grains of rhubarb may be given in a draught of any of the diluting liquors.

If the vomiting cannot be otherwise restrained, saline draughts may be given in the act of fermentation, to each of which may be added from five to ten drops of liquid laudanum.

But if the patient's strength is not exhausted, the vomiting and purging should

not be hastily stopped; and therefore, unless faintings and other symptoms of extreme weakness appear, these evacuations should rather be promoted, as we have before directed, than checked.

When the stomach is sufficiently cleared, and, at all events, whenever the patient seems much weakened, the use of opiates will be necessary; which may be given in quantity from ten to twenty drops in a little simple mint-water, two or three times a day, or oftener, according to the urgency of the pain, or the violence of the evacuations.

Or the following draught—

Take of simple cinnamon water, one ounce—
of spirituous cinnamon water, half an ounce
—of liquid laudanum, from ten to twenty
drops, according to age and circumstances;
to these ingredients may be added white sugar,
and a drop or two of oil of mint, to
make it palatable.

But if the symptoms of weakness are alarming, if the pulse is low and intermitting, if faintings occur, and the approach of convulsions is apprehended, the quantity of twenty-five or thirty drops of the liquid laudanum must be given in a table-spoonful or two of the strong or spirituous cinnamon water, and the patient should drink after it warm negus, of equal portions of generous wine and water; or strong wine whey: and in this case it will be right to apply comfortable fomentations to the pit of the stomach, such as flannels wrung out of camomile tea and sprinkled with camphorated spirit of wine or Hungary water; and the lower extremities should be first bathed in warm water, and then rubbed with flannels, and bladders or bottles of warm water, or heated bricks, should be applied to the soles of the feet; and particular care should be taken that the patient does not swallow large draughts of liquids; a tea-cupful is the largest quantity he ought to take at a time, but it may

be repeated frequently, so as to convey enough into his stomach.

After the abatement of the symptoms, it will be necessary to continue to administer the opiate, at least night and morning, for several days; and the patient should guard against a relapse by being attentive to take nourishing food frequently, but in small quantities at a time, and by the use of the bark and other bitters, which will contribute considerably to the re-establishment of his health.

But a medicine yet remains to be mentioned, the free use of which will probably be found an effectual, safe, and easy remedy for this dangerous disease; and it is by so much the more valuable, as it seldom requires any means to be employed either for cleansing the first passages, or promoting the discharge of bile previous to its being administered: this medicine is the *Columbo root*; of which, from half a dram to two drams finely powdered, may be given in a glass of peppermint water at any stage of the disease, however early, and repeated every three or four hours, according to the situation of the patient and the violence of the symptoms; and this remedy, administered in this simple way, hath been often known to afford relief, when the efforts of art, exerted in much more elaborate prescriptions, have totally failed of success.

In the treatment of this disease it will be always right to enquire, if the cause can be readily assigned; because in some cases, where the occasion can be ascertained, remedies suited to it may be immediately applied, which may in some measure differ from those which are directed under a general consideration of the disorder: thus, if it hath proceeded from poison, proper directions will be found under that head; if it has been produced by violent purgatives or emetics, Venice treacle and other warm opiates may be proper to be given internally, and liniments of a strengthening,
oily

oily composition, may be required to be rubbed over the stomach and belly; if it has been brought on by fermenting or corrupted food, evacuations of vomiting procured by a few draughts of warm water, and a gentle laxative, will in general prove effectual to remove it; and if violent excesses of the passion of anger have occa-

sioned it, emetics and purgatives must be avoided, and in that case absorbents with nitre, water-gruel, decoction of the shavings of hartshorn, and the like, will be the proper liquids to dilute; after the use of which it may be right to give a few grains of ipecacuanha, and a small dose of manna and rhubarb.

C H A P. XXVIII.

Of a Diarrhœa, or Looseness.

WHEN the strength of the patient is but little affected by a *diarrhœa*, or *violent looseness*, it may generally be looked upon rather as a salutary evacuation than a disease; and it ought never to be suddenly checked or stopped by medicine, unless it continues so long as to bring on a considerable degree of weakness, or to threaten a more dangerous disorder in consequence of it.

This disease proceeds from irritation in the intestines, and the causes of this preternatural irritation are numerous: the most common are, an ill judged and profuse use of purgatives; too great acidity, or a disposition to putridity in the aliment; acrid bile; excess of eating or drinking; obstruction of any customary evacuation, of perspiration, or the like; excessive passions; matter secreted from abscesses and carried to the intestines; worms; putrid vapours or exhalations; or a translation of the matter of other diseases to the intestines.

The symptoms are merely the copious discharges by stool; all others which attend this disease may either be considered as accidental, or as actually joined with and making a part of the disorder; the loss of appetite and strength are consequences of the excessive evacuation.

The discharges are various in different patients, and in the same patient at different times; if there is a defluxion of watery humours, the looseness is more troublesome by night than in the day, and particularly after sleep; if the disorder originates in the stomach, the discharge is slimy and chiefly made in the day; when an offensive bile is too copiously emptied into the intestines, the stools are more frequent by night: in some very violent cases pieces of skin appear in the stools, resembling the coats of the intestines; these are parts of the outer skin which lines the *rectum* or strait gut, which in this disease is separated and thickened, and then thrown out of the body.

Fevers sometimes terminate in diarrhœas, and if they abate in a day or two produce salutary effects; but a continuance frequently proves fatal: and when a looseness remits and returns, and is accompanied with symptoms of fever, it is always troublesome and often dangerous; a total loss of appetite, and violent hiccups are also disagreeable symptoms; and if the discharges become exceedingly copious and frequent, faintings and other signs of debility will occur. If a vomiting comes on spontaneously after a purging of long continuance, it generally proves a cure; and

and acid eructations or breaking of wind, which do not accompany the disorder from the beginning, but commence afterwards, are favourable indications; as are also a moist skin, and a sediment in the urine.

Preparations of rice with proper quantities of cinnamon, and of sago with Port wine, will be the proper diet in this disease; and the common drink may be the white decoction, camomile tea, rice gruel, or thin broth made from lean veal, or a sheep's head, taking off the fat carefully after it has boiled; these broths have more of jelly in them than those which are made from other animal flesh.

When this disease is unattended with violent symptoms, or with any fever or considerable degree of pain, the stomach may be cleansed with a few grains of ipecacuanha, or a small quantity of the emetic wine; and a small dose of tincture of rhubarb taken immediately afterwards will generally remove the complaint.

If the disorder is occasioned by obstructed perspiration, the same methods must be used as in other diseases arising from the same cause; the patient must live low, drink freely of diluting liquors, bathe the legs and feet in warm water, and rub them with flannels; it will also be right to promote perspiration by such small doses of ipecacuanha as may not bring on sickness and vomiting, and for this purpose grown persons may take two or three grains in powder, and repeat it at the distance of four or six hours, as occasion may require; and the quantity for children must be proportioned to their age, or to the latter it may be administered in clysters, repeated at like distances if necessary.

If the discharge should be so excessive as to occasion the pulse to fail, it will be necessary to administer opiates; but we can by no means advise the giving them till loss of strength and increasing weakness, render it dangerous to permit the continuance of the evacuation. In that case—

Take rhubarb in powder, and diascordium, of each one scruple—of oil of cinnamon, one drop. Make a bolus, to be taken at going to rest.

Or the following draught.

Take of tincture of rhubarb prepared with wine, one ounce—of rhubarb powdered, half a scruple—of liquid laudanum, from five to ten drops. Make a draught, to be taken as above.

To make the tincture of rhubarb.

Take of rhubarb in powder, one ounce and half—infuse it six days in a pint of brandy. Let it stand in a moderate heat, then pour or strain it off fine; two drams of the lesser cardium seeds added to the infusion will render it more palatable, and gently warm the stomach and bowels. The like quantity of rhubarb and cardium seeds may be infused in wine, with the addition of a glass of brandy; but this will require a less degree of heat than the former.

When this disorder arises from the passions of the mind, the cure will be found difficult; the anxiety and restlessness which are occasioned by grief, anger, or the like, are checks to perspiration, and powerfully counteract all means which are used to excite it; in this case vomits and purges will be equally improper, and opiates and other antispasmodics must be principally relied on; liquid laudanum in small doses of from six to twelve drops each may be taken twice a day, in a tea-cupful of the infusion of valerian or pennyroyal; and the patient's mind should be soothed and diverted as much as possible; it will be right also to keep the feet warm in flannels, or thick woollen stockings.

If the diarrhoea should be occasioned by the stoppage of usual evacuations, all endeavours should be used to restore them; or where that cannot be done, it may be proper to bleed and substitute others: and no time must be lost in taking these steps,

as

as such a case will soon become extremely dangerous.

When this disorder proceeds from repletion or excess in eating or drinking, first empty the stomach with a vomit excited by ipecacuanha, to the quantity of a scruple or half a dram for a grown person; and at the distance of forty-eight hours, give a like quantity of rhubarb in powder, or three table-spoonfuls of the vinous tincture of rhubarb; and if the looseness continues, repeat the same course, keeping the patient to a light diet and diluting liquors.

Habitual diarrhœas, or those of very long continuance, must be treated with great caution: moderate exercise on horseback, or rather in a carriage, strengthens the bowels; and doses of the powder of ipecacuanha, so small as not to act emetically, with aromatics and the chalybeate waters, together with diuretics in some cases, will, if persisted in, effect a cure.

When the *tenesmus* or urging to stool is extremely troublesome, the following clyster is recommended.

Take of starch boiled to a jelly, from four to six ounces—best French brandy, from half an ounce to an ounce—and from twenty to thirty drops of liquid laudanum. The quantities must be proportioned to age and other circumstances. Two drams of starch will make six ounces of jelly.

A looseness which proceeds from substances of an acrid nature or poisonous quality must be promoted, and vomiting excited, by giving the patient considerable quantities of fat broths or other oily liquids; and if symptoms appear from which it may be apprehended that the intestines are inflamed, it may be necessary to bleed, and administer small doses of laudanum to allay the irritation.

When a diarrhœa is occasioned by acrid bile, small quantities of nitre given with the other medicines will restrain the discharges; and when it is the consequence

of gouty or scorbutic matter, repelled from the extremities or other parts of the body, and thrown on the intestines, small doses of rhubarb or manna will be necessary; and endeavours should be used to remove the cause to a less dangerous situation, and to invite the gout to the extremities by fomentations, bathing them in warm water, and applying warm poultices to the soles of the feet; and this end will also be sooner attained by exciting perspiration with warm diluting liquors.

Diarrhœas which attack women in child-bed are at all times alarming, and after they have continued a day or two become extremely dangerous; a clyster of starch jelly and a few drops of liquid laudanum should be thrown up, and a tea-cupful of the infusion of Columbo root, made in boiling water, should be administered after every stool: this medicine, as well as the ipecacuanha, is safe and effectual, whether the disorder is attended with a fever or not; and may also be given in the early stages of it, when astringents might be prejudicial.

Infants who do not suck are frequently subject to watery stools attended with gripes, in which cases the discharges are also sometimes green and foetid, and denote approaching convulsions; when this happens, no time should be lost in procuring a breast for the infant, and three, four, or five drops of the antimonial wine, should be given to excite vomiting every four, six, or twelve hours, until an amendment appears, both in the colour and consistence of the stools; whilst they continue greenish, the following mixture will also be useful.

Take of the Columbo root powdered, from one scruple to one dram—of magnesia, from two scruples to two drams—of simple mint water, four ounces.

Give a tea-spoonful of this mixture every second, fourth, or sixth hour, according to circumstances; and the same medicine will

be found equally salutary in the diarrhœa which frequently attends the cutting teeth.

Diarrhœas occasioned by worms, can only be stopped with safety by removing the immediate cause; all attempts to check them, till medicines have been administered to destroy the worms, will not only prove ineffectual but dangerous: after this has been done, the bowels may be strengthened, and a return of the disease prevented by small doses of rhubarb, and drinking lime-water in the quantity of half a pint in the twenty-four hours, divided into two draughts, one to be taken before noon, and the other towards the evening.

If flatulencies and windy eructations accompany this disease in such a degree as to be very troublesome, the following medicine may give relief.

Take of extract of logwood, one scruple—of the powder of *cortex thuris* or *elutheria*, ten grains. Make a bolus with simple syrup.

Astringent medicines are only to be given when, from the excess of the discharges, the patient's life is in actual danger; and where these must be admitted, the preparations of logwood are preferable to most others.

To make the decoction of logwood—

Boil three ounces of powdered logwood in two quarts of water till it is reduced to one; towards the end of the boiling add two drams of cinnamon. Let the whole boil together a few minutes; strain or pour off the decoction fine when it is cold.

Two or three ounces of this decoction may be taken, one, two, or three times a day, according to the frequency of the evacua-

tions, which it will tinge so much as to make both stool and urine appear like blood; it is a mild astringent, and hath this advantage over most others, that it will not be injurious, even though the disorder should be attended by a degree of fever.

The extract may be made as follows.

Boil a quarter of a pound of logwood, finely powdered, in one quart of water, till it is reduced to a pint. Let it stand till the powder subsides, then pour off the liquor fine, and adding another quart of water to the powder, boil it again till one half is consumed; and this also must be poured off, and the same process repeated a third and fourth time: then throw the several liquors together, mix them well, strain them, and boil again till the whole is of a proper consistence.

An extract of logwood may also be made, by first covering the powder with rectified spirit of wine, and letting it digest before it is boiled in the water, and afterwards adding the spirituous extract to the watery, being first evaporated to the thickness of honey, and boiling both together to a proper consistence.

The means of preventing this disease, are generally temperance, choice and care in the articles of food and liquor, and attention to avoid all exposures to the danger of obstructed perspiration: those who are subject to it, under particular circumstances, will guard against it by abstaining from whatever occasions the irritation which brings it on; and few men are so regardless of the inestimable blessing of health, as not to observe when any thing particular usually offends the stomach, or produces indisposition or disease.

C H A P. XXIX.

Of the Bloody Flux, or Dysentery.

THIS disease prevails most in the spring and autumn, and more in the latter than the former; and those are most subject to it who are full of blood, of bilious habits, or who lead irregular lives; and those who are exposed to damps and night air, or are confined to close and unwholesome places: hence it frequently rages in camps, and spreads in gaols, prisons, and hospitals.

It will therefore appear, that whatever obstructs perspiration may occasion this disorder, and as the bowels are more or less weak, nature seeks relief in discharges from them, and the constitution is racked in proportion. Putrid air offends the bowels and irritates them to immoderate evacuations; nor is putrid aliment of any kind less pernicious: fruit, fermented liquors, and all high and spicy food may also bring it on; but it is more commonly communicated by infection, being contagious in a very high degree.

This disease may also be described under three different denominations, according to the different appearances; the *inflammatory*, the *putrid*, and the *malignant*.

The symptoms of the *inflammatory dysentery*, are a violent fever; a hard pulse, contrary to what happens in the other kinds, soon becomes full, and continues so during the whole progress of the disease, and even in the decline of it; an unceasing and almost insupportable pain in the belly, which is augmented by the part being touched, and is still more violent after vomiting or reaching; the stools frequent but inconsiderable in quantity, sometimes streaked with blood, at others almost wholly blood,

and in some instances matter only without any bloody appearances; a violent head-ach; flushes, or a settled red in the face; and, in some cases, a swelling or distention of the belly.

The *putrid dysentery* is discovered by not being attended by any fever, or but in a very slight degree; a bitterness in the mouth which denotes the first attack; a discharge of bilious matter by vomit, among which worms are frequently thrown up; the patient's countenance is of a dead pale; he has repeated shiverings in the whole course of the disorder; and his stools are of various colours, but mostly streaked or mixed with blood.

In the beginning of a *malignant dysentery*, or when any of the other kinds degenerate into it, the patient complains of sudden weakness, great anxiety about the pit of the stomach, and heaviness in the head; his aspect is dull, oppressed, and deadly; his voice becomes weak; he is frequently seized with faintings, and sometimes with slight convulsions; millary eruptions appear in some cases, and in others discoloured spots and blotches; and these symptoms are accompanied by a very weak pulse, and constant complaints of sickness in the stomach.

These are distinguishing signs of the different appearances of this disease; but there are also general symptoms which for the most part occur, whatever be the particular nature of the disorder.

These are constant and violent griping pains in the belly; a perpetual inclination to go to stool; a painful descent as it were of the bowels following every evacuation; the discharges at first of greasy or frothy mucus

mucus or slimy matter, with now and then an excrementitious stool intervening without any considerable pain: as the disease advances, the discharges begin to be streaked with blood, and at length assume the appearance of pure blood; such bits of skin as are described in the foregoing chapter are frequently perceived in them, and a part of the intestine is sometimes actually forced out at the fundament, occasioning great pain and uneasiness; the patient is also exceedingly troubled with wind in the stomach and violent eructations.

This disease may be distinguished from other fluxes by the pain in the bowels being much more acute, by it's not being accompanied with constant vomiting, and by the bloody appearance of the evacuations.

This disorder is always attended with danger; the degree of it may be taken from the violence of the symptoms, the strength of the patient, and the continuance of the disorder: but it ought never to be disregarded, for nature seldom contributes to the cure, (except in infancy) and until the disease gives way, a mortification of the bowels is always to be apprehended.

If the excrements are of various colours and very offensive, it is probable that the intestines are ulcerated; a case of extreme danger: the appearance of blood or other token of irritation in the first stages of the disease is unfavourable; when it has been taken by infection, and is attended with urgent fever, or hath been preceded or is accompanied by any other disorder, the danger is enhanced proportionably; if the excrement passes away involuntarily, if clysters are immediately returned, or if the passage is so stopped as to prevent their being thrown up, little hope can be entertained; and a feeble pulse, difficulty of swallowing, convulsions, coldness of the extremities, and vomiting with hiccups, are mortal symptoms.

In the cure of a disease which requires more care and skill than most others, and

which is always attended with a certain degree of danger, cautions which may enable us to prevent, are nearly as valuable as prescriptions for the cure. In warmer climates, and even in this, the cold and chilling evening dews, which frequently succeed hot and sultry days, should be carefully avoided; those who are in camps should be attentive to cover excrement as soon as it is discharged, and those who are unhappily confined in prisons and gaols, should endeavour to get every thing of the kind removed from their places of confinement as speedily as possible. When this disorder is prevalent, the bark may be taken at least once every day as a preventive; and upon any symptom of it's approach, an emetic, and a sweat excited by warm diluting liquors, and followed by such a dose of rhubarb as may gently open the body, may probably stop it's farther progress.

The first great article of regimen in this dangerous disease, is an attention to cleanliness; it is not only of the first importance to the patient himself, but it is absolutely necessary to the safety of those who are about him; every thing the patient wears or uses should be frequently changed, and neither the excrement, the foul linen, or even the urine, should be permitted to remain in the apartment of the sick a single moment; the air of the chamber should be kept moderately warm, but as pure as possible, by admitting fresh air into it frequently under proper precautions, and by the fumes of hot vinegar, sprinkling the floor and furniture with other acids, and burning lavender flowers, myrrh, and other aromatics.

The diet may be of rice, salop, panada, sago, and broth made from lean animal flesh, and in particular of veal or calves feet; jellies also of animal substances with cinnamon; and the following preparation is recommended by modern writers as admirably calculated not only for food, but to be administered in clysters.

Take

Take a pound or two of the finest wheat flour, and tie it as tight as possible in a linen cloth; then dip it in water, and dust it over with flour, and repeat this operation till a coat or crust is formed outside the cloth, which will prevent the water from penetrating; in this state put it into a pot of boiling water, and let it boil six or eight hours, till it becomes a hard dry mass: of this two or three spoonfuls may be grated and boiled in new milk and water to the thickness of pap, and eaten with sugar sufficient to make it palatable.

Nor must we omit to mention broth, made of what is called in the north of Britain a *singed head*; being a sheep's head with the skin on, and from which the wool hath been burnt or singed off with hot irons: the head is directed to be boiled till the broth will jelly, and this is recommended by some, not only as proper food for such as labour under this disease, but as a sovereign remedy for the cure of it. Cinnamon or mace may be added in the boiling to render the taste more agreeable, and the feet may be used as well as the head, being prepared in the same manner.

If the disease is of the putrid kind, not only the patient's food and liquors may be acidulated, but he may be freely indulged in the use of ripe fruits, particularly strawberries and currants; nor will preserved fruits or jellies of fruit be in the smallest degree prejudicial.

The proper drinks in this disease are various preparations of milk, either in whey, butter-milk, or mixed with water; a decoction of the common mallows in milk and water, or the white decoction; also water wherein toasted bread hath been boiled, or a hot iron quenched; water-gruel or camomile tea may also be drank occasionally; and, wherever a putrid tendency appears, all these drinks should be acidulated with cream of tartar, tamarinds, or jelly of fruits.

If the degree of fever be considerable, and a full, strong, and hard pulse, indi-

cates a tendency to inflammation, bleeding may be necessary; but unless the inflammatory symptoms are manifest, this operation is by no means adviseable.

Immediately after bleeding, or in case that should not be necessary, it will be right to cleanse the first passages by a few grains of ipecacuanha, which may be worked off with camomile tea in moderate quantities; after this the bowels should be kept open with mild laxatives, such as rhubarb, castor oil, or the like; in the inflammatory kind small doses of tartar emetic are also proper, though some recommend a repetition of the ipecacuanha in small quantities for some time.

If the patient should be of a choleric or bilious habit, and especially if the heat and thirst should be considerable, the following bolus may be useful.

Take of nitre, five grains—of ipecacuanha powdered, three grains—of theriaca Andromachi, one scruple—of Locatelli's balsam, enough to make a bolus.

In every species of this disorder, the promotion of perspiration will contribute considerably to the cure; and in the beginning of this disease it is so beneficial, that exciting it by drinking plentifully of diluting drinks will sometimes render other medicine unnecessary: in the malignant kind of dysentery this evacuation is so necessary, that endeavours must be used to bring it on by cordials, as well as by a vapour bath, or by wrapping the legs and thighs in flannels, which have been wrung out of warm water; and in this case the bolus above prescribed may also be administered.

The following medicines are also recommended after the stomach hath been washed out.

Take of rhubarb dried by the fire and powdered, one scruple—of diascordium, half a scruple—of opium, half a grain—oil of cinnamon, one drop—simple syrup, enough

to form a bolus, which may be taken immediately after the operation of the emetic.

Take of the chalk julep, one ounce and half—of mithridate, one scruple. Make a draught, to be taken every fourth hour.

If, from the violence and continuance of the evacuations, the patient's strength should fail, astringents may be necessary; among these Guiana bark is said to act without the usual inconveniencies commonly attending the use of these medicines. The decoction of it, made in the following manner, may be taken in the quantity of two ounces, or less, according to age and circumstances, twice or thrice a day.

Boil two drams of Guiana bark bruised, in one pint and a quarter of water, till it is reduced to a pint. Let it stand to subside, and then pour or strain it off fine.

Logwood is also efficacious in the removal of this complaint, and the following method of administering it hath been advised.

Take of the extract of logwood, two drams. Make twenty pills, three or four of which may be taken every fourth or sixth hour, and washed down with a draught of the decoction of Guiana bark, in the quantity prescribed above.

The confection of Japan earth is also recommended, of which the following is the composition.

Take of Japan earth, one ounce and half—tormentil root, nutmeg, and frankincense, of each one ounce—opium dissolved in white-wine, two scruples—simple syrup and conserve of roses, of each seven ounces. Make an electuary.

Of this let the patient take from a scruple to a dram, according to age, strength, and symptoms, three or four times a day, drinking after it a draught of the decoction

above prescribed, or of the decoction of Columbo root, which is also useful in this disease.

Starch clysters, or those of fat broth, with from twenty to forty drops of liquid laudanum, may be frequently administered, which may give relief when the tenesmus or inclination to stool is particularly troublesome.

The following electuary is also recommended.

Take spermaceti and yellow wax, of each two drams—compound powder of gum tragacanth and diascordium, of each one dram—of syrup of poppies, sufficient to make an electuary. The quantity of a nutmeg to be taken twice a day.

After the removal of this disorder, the patient must continue his care as to diet and liquors, avoiding high, hard, and seasoned animal food, and spirituous, malt, and other fermented liquors; for common drink the decoction of toasted bread will be proper, and this may have the addition of a moderate quantity of wine, or a glass or two of generous wine may now and then be taken without mixture.

Air and gentle exercise, but not to fatigue, will also contribute to the patient's recovery; and small quantities of the Peruvian bark are also advised to restore the tone of the intestines after the abatement of this disease; though some are of opinion, that the *cortex thuris*, or *elutheria*, is in this case to be preferred for that purpose; and others recommend infusions of bitters in wine or brandy; and lime water and milk, in equal quantities, to be taken twice a day.

To make stomachic bitters.

Take gentian root sliced, and fresh lemon peel, of each half an ounce—of dried orange peels, half an ounce—of the lesser cardium seeds bruised, one dram. Infuse the whole ten days in a pint of French brandy, letting it stand near the fire, and shaking the bottle frequently: strain or pour it off fine.

From

From a tea-spoonful to a table-spoonful may be taken, once or twice a day, in a small glass of good white wine.

It may be necessary to add, that the *vitrum antimonii ceratum*, or *cerated glass of antimony*, and a gentle opiate after it, hath

been held by some to be a specific in this disease; it is directed to be taken in quantities from two grains to ten, in proportion to the situation of the patient, two or three times a day, or even oftener if the stomach doth not reject it.

CHAP. XXX.

Of the Coeliac Passion and Lientery.

BOTH these diseases are diarrhœas or fluxes of the belly, and both seem to proceed from nearly the same causes, though the appearances are different.

In the former the aliment is carried off in a liquid state, but not well digested, and the discharges resemble chyle.

In the latter disorder the aliment is hurried through the body in a state wholly or nearly indigested; and in both cases the patient, if not relieved, sinks into a wasting and irrecoverable weakness, and perishes for want of a supply of juices.

Both these diseases proceed from relaxation of the intestines and stomach; or they may be caused by obstructions of the intestinal glands, which do not therefore supply a sufficient quantity of that fluid which is necessary for diluting the chyle, and rendering it fit to pass into the lacteal or absorbent vessels of the intestines, by which means it passes off in the excrement.

When these disorders succeed other fluxes, and in particular dysenteries, they are attended with great danger, and frequently end in the patient's death: broken constitutions, persons of advanced ages, and infants, are also liable to suffer very severely in them; and if they are attended with

heat and thirst, the difficulty of cure will be increased.

The symptoms differ only in the circumstances already mentioned from those of diarrhœas or other fluxes, and as they proceed in some measure from an interception of the humours accustomed to be discharged from the glands in the first passages, astringents are prejudicial; and those medicines which gently irritate the bowels and cleanse the mouths of their glands, are manifestly best calculated to give relief; for this purpose vomits of ipecacuanha should be given, and the operation of them succeeded by small doses of rhubarb or other laxatives: and this treatment, with a due regard to regimen in diet and liquors, which must be conformable to the directions given in diarrhœas, will, if properly pursued, in general remove these disorders.

But as indigestion or weakness of the stomach contributes to produce these diseases, so the Jesuits or the Guiana bark and stomachic bitters will be proper restoratives and strengtheners; and if any pain or extraordinary degree of soreness should remain, small doses of opiates will assist in carrying off those complaints.

C H A P. XXXI.

Of the Diabetes.

THIS is a disease, in which whatever is drank suddenly passes off in a crude state, and with very little change from that in which it was swallowed; or in other words, it is a discharge of urine exceeding the quantity drank, and going off so quickly, as not to admit of it's being properly digested.

Youth are very little subject to this disorder; those who are in the decline of life are most liable to it; and in particular those who have been accustomed to a liberal use of wine or other strong liquors, and those who have passed their lives in hard labour or violent exertions.

The causes are generally said to be a relaxation of the ducts or passages from the kidneys, too great a thinness of the fluids, or obstructed perspiration; and these may be the effects of violent diseases, excessive evacuations, strains, extreme hard labour, or violent and stimulating medicines; but it may probably in many instances be owing to a defect of vital heat, to a thin or dissolved state of the blood, or to a concurrence of accidental circumstances driving too large a quantity of it to the urinary passages.

The symptoms of this disease are a frequent and too copious discharge of urine, or of apparent urine, which is generally insipid, but has sometimes a taste of sweetness, and smells agreeably; this discharge is accompanied with an hectic heat, thirst, a weak but quick pulse, loss of appetite, and wasting of the flesh till the patient is reduced to skin and bone. This disease is slow in it's approach, in the beginning the mouth is dry, the spittle white and frothy, and an unusual heat is felt in the bowels; after it has proceeded some time, a kind of dropsical swelling is no uncommon symp-

tom. If by any accident the urinous discharge is checked suddenly, the loins and parts adjacent, as well as the legs and feet, swell; what urine passes is brought off with considerable pain and difficulty; at length a total suppression takes place, and death ensues. The sweetness of the urine is not a constant symptom; it seldom attends till the patient's case becomes dangerous, and is probably occasioned by the chyle passing into it in an unaltered state, as the same observation may be made on the expectorated matter in the last stage of a consumption arising from the like cause.

When this disorder is taken in the beginning, and the constitution of the patient is tolerably sound, a cure is sometimes effected; but if it be of long standing, or the habit is shattered or debilitated, little hope of relief can be entertained.

The diet should be nearly the same as in consumptions or hectic fevers; broth, or rather tea, of lean animal flesh, shell fish of most sorts, jellies, sago, and salop with milk; all these should be taken in small quantities at a time, as well as the patient's drink, which should be barley-water with comfrey root boiled in it, and lime-water mixed with an equal quantity of milk; the Bristol water has also been highly recommended, though some prefer the lime-water, newly made and drank as often as the patient's thirst requires it with milk, and others advise allum whey as a specific, and direct half a pint of it to be taken night and morning. To make the allum whey—

Boil one dram of allum in a pint and half of milk till the curd separates, then take away the curd with a spoon. Let the whey stand till it settles, and pour it off fine.

Acids

Acids of fruits are also recommended to quench the patient's thirst, and barberries or other acid fruits preserved; and raisins with biscuit may constitute a very wholesome part of the patient's food.

Moderate exercise on horseback, but not to fatigue, will be useful; and rubbing the patient's body all over with flannels or a flesh-brush assists perspiration, which peculiarly tends to divert the discharge through the kidneys.

The patient should also wear a flannel shirt next his skin to promote a discharge by perspiration, and his loins should be supported by a strengthening plaster, or a broad girdle or other bandage round the lower part of his belly.

If medicine is necessary, the course should begin with gentle purges of rhubarb with spices, either in substance or infused in wine or brandy, and taken often enough to keep the body gently open; the tincture of rhubarb with the lesser cardamom seeds will answer the purpose, or the following electuary.

Take of frankincense, three drams—of rhubarb, one dram—of tormentil, two drams; all these in powder—of balsam of capivi and conserve of roses, of each half an ounce.—simple syrup, enough to make an electuary; of which the quantity of a nutmeg may be taken twice a day, and washed down with three or four spoonfuls of the following mixture.

Take tincture of roses and decoction of the Peruvian bark, of each six ounces. Mix them well together.

Blue vitriol, to the quantity of half a grain twice a day, dissolved in any agreeable liquid, hath been also recommended, and the tincture of cantharides or Spanish flies taken in the same manner; of this the pa-

tient must begin with ten drops, and increase occasionally to twenty as it agrees, and according to the state of the disease and the constitution, drinking freely of barley-water or decoctions of the mucilaginous herbs.

But perhaps less violent astringents may in general be substituted, such as powders made of equal parts of allum and Japan earth, and taken to the quantity of half a dram three or four times a day if the stomach will bear it, drinking after each dose two or three table-spoonfuls of the tincture of roses: the allum must be first melted.

Gentle opiates may also be useful, and may be given by ten or twelve drops of the liquid laudanum, once, twice, or thrice a day, in a draught of the patient's common drink.

By way of strengthener and restorative, the Peruvian bark may be administered, either in powder, in a glass of wine, or in decoction; in the latter case it should be repeated often.

To prevent this disease, or at least a return of it, avoid violent exercise and excessive drinking; let the wine taken be rather Port or Rhenish than Spanish or French; sleep on a mattraß rather than a feather-bed, and rub the loins frequently with a brush or dry flannel.

That diabetes, or rather incontinence of urine, which is occasioned by extreme age, or constitutional weakness or decay, or which is the effect of external injury or of some acute disease, seldom admits of a cure; such astringent and strengthening medicines as we have prescribed above may lessen the complaint, and strict attention to cleanliness, by removing the wet linen or bed-cloaths and supplying dry, may in some measure prevent it's being very troublesome or offensive.

C H A P. XXXII.

Of the Ischury, or Suppression of Urine.

THIS disorder is described as of two kinds, a *strangury* and *suppression*: the former is a retention of the water in the bladder, attended with frequent motions to discharge it, but without effect; or if any passes, it is in very small quantities, and with much difficulty; the latter is unaccompanied with any inclination to discharge the urine, or only occasional and very sudden inclinations.

This disorder may be occasioned by inflammation in the bladder or kidneys, want of mucus in the urethra or passage from the bladder, caruncles or fleshy excrescences in the same passage, defluxions of humours on the neck of the bladder, palsy in the *detrusor urinæ* or muscular covering of the bladder, a retention of hardened excrement in the straight gut, or from coagulations of blood in the bladder, from blows, bruises, or external injuries.

Though some of these cases may demand the introduction of the catheter, yet if the urine is lodged in the bladder and cannot be discharged, whether the cause be cold, a too long retention of the urine, or whatever else deprives the fibres of the bladder of their contracting powers; or if the suppression is from a stricture in the neck of the bladder occasioned by inflammation, an immediate recourse to this instrument will occasion much pain, and other medicines should be first tried: at any rate it ought only to be used by persons of skill; and even bougies, which in many cases may answer the purposes of the instrument, require a cautious and somewhat experienced hand.

Yet this disease demands speedy attention, for if it continues more than six or seven days it is generally fatal; when it is in a high degree, it is also accompanied

with a perpetual inclination to stool, a coldness of the extremities, a disposition to vomit, and a weak pulse; if these symptoms are attended with a hiccup, or if a smell of urine proceeds from the patient's mouth or nostrils, there is no hope; and such also is the case if the disorder is occasioned by a wound of the spine, or a dislocation of any of the vertebræ or joints of the back-bone.

If the patient is of a full or sanguine habit, bleeding will be necessary; and the following clyster may be injected.

Take of common decoction, ten ounces—of Venice turpentine dissolved with yolk of egg, six drams—of Florence oil, three ounces—purging salts, three drams. But this is the full quantity for a grown person, and must be lessened according to age and other circumstances.

Or the following—

Take of the common decoction, half a pound—of balsam of capivi mixed with yolk of egg, two drams—of Florence oil, two ounces—of liquid laudanum, from thirty to forty drops.

To make the common decoction—

Put two ounces of camomile flowers, elder flowers, and sweet fennel seeds, of each an ounce, into a gallon of boiling water. Let the ingredients boil a few minutes, and then strain off.

After these clysters the body should be kept open by gentle laxatives, such as infusion of fenna, or manna. The following mixture may be given.

Take of pure water, one ounce—of sweet spirit of nitre, thirty drops—nutmeg water and

and Florence oil, of each two drams—liquid laudanum, from five drops to twenty—syrup of marsh mallows, one dram.

But baths and fomentations are of great importance in the removal of this disease: if the whole body can be immersed the effect will be greater; but if this cannot be done with convenience, flannels wrung out of a decoction of the emollient herbs, or bladders filled with it, should be frequently applied to the part affected; and after this has been repeated often, the herbs themselves may be squeezed somewhat dry, and applied in a linen cloth.

When children are attacked by this complaint, poultices of raw onions or radishes have been efficacious.

If the neck of the bladder is inflamed, the use of the catheter will be required till the inflammation abates; in this case diuretics cannot be admitted without inconvenience; but nitrous medicines, neutral salts, spirit of sea-salt, and the like, may be diluted in the common drink; small doses of camphire may also be given often, and de-

coction of parsley roots with a little nitre may be drank as the patient's thirst demands; bladders of warm water may also be applied to the parts affected by the inflammation, and in this state of the disease bleeding will be beneficial, and stools should be procured with the purging salts and castor oil.

The food and liquors must be regulated by the appearances and symptoms of the disease: if they are inflammatory, the patient's diet should be low, and his drinks acidulated; in other cases broths, panada, and jellies of hartshorn or calves feet, and sago, should compose the food; and the drinks may be decoctions of emollient herbs, in which a small quantity of sweet spirits of nitre may be admitted.

As sedentary occupations are said to encourage this disorder, those who are confined to them should be particularly careful to avoid excesses in eating or drinking, and hard indigestible food; stale or sour liquors of all kinds are prejudicial, and lying long in bed, and particularly in a soft one.

CHAP. XXXIII.

Of the Stone and Gravel.

THE former is a hard stony concretion in the kidneys or bladder, too large to pass off with the urine, or making it's passage with great pain and difficulty; the latter are small stones which pass from the kidneys into the ureters, and are discharged with the urine.

The cause of these diseases may probably be similar to that which produces the gout, and both may be occasioned by a defective solution of the earthy particles of our aliment by the powers of digestion; many other causes are assigned, such as

drinking much wine, and using earthy or stony water; but reasons have been offered why neither contribute particularly to the formation of gravel and stone: a sedentary life may undoubtedly increase these complaints, which may also be aggravated by excesses, by high and luxurious living, or by lying too hot, and indulging too much in bed; it may also be hereditary.

Persons of vigorous constitutions are more liable to these diseases than those of relaxed and cold habits; and those who are in the decline of life, and who have been much

much afflicted with gout, are peculiarly subject to them; and whoever will attentively observe and consider, will discover an affinity between the gravel and stone and the gout, and may remark, that a fit of one is frequently changed into or terminates in a seizure of the other; and this observation will be rendered more striking, if we recollect the chalky concretions which are frequently formed by the gout in the joints of the extremities, and compare them with the stony substances produced in the kidneys and bladder.

In some cases the difficulty of discovering whether there is actually a stone in the bladder or not is so great, as to elude the best judgment that can be formed from symptoms, and even the greatest skill in using the catheter; but in general it may be known by a soreness and itching at the top of the penis; by a desire of going to stool on every attempt to discharge urine; by the patient's walking with his legs wide; by intense pain on every uncommon motion or exercise; by his passing his water drop by drop, or having it suddenly stopped if it is going off in a stream; by his receiving ease on lying back, and discharging his urine more easily in that posture; and sometimes by a discharge of matter either white or bloody; but the latter is not a common symptom.

The signs of stones in the kidneys are, obtuse pains in the parts thereabouts; sickness, nausea, and vomiting; wind and costiveness; the pain sometimes affecting the groin, the hip, or the adjacent testicle; the leg on the same side as the diseased kidney is at times contracted and seems numbed; a total suppression of urine, or it is discharged frequently in very small quantities at a time, and with extreme pain and difficulty; and a very distinguishing symptom of stones in the kidneys is, that a sediment in the urine subsides almost immediately after it is discharged, and if this sign accompanies all or the greater part of the

others, no doubt will remain of the nature of the disorder.

When the stones are of such a size as to descend into the ureter, and yet to be detained there for a time, their situation is easily discoverable by the catheter; and when they are at length forced off with great pain, the patient is said to have had *a fit of the gravel and stone*.

In these disorders very great attention is due to regimen, and in particular to food and liquors; the former should be of a light and laxative kind, and may consist principally of such vegetables as tend to promote the secretion of urine; among these the whole onion tribe may be recommended as medicines; and parsley, asparagus, artichokes, carrots, and every other root and vegetable which affects the urine either as to colour or smell, will be beneficial in these diseases: the drinks may be any preparations of milk, and decoctions of the diuretic and emollient herbs, such as parsley, marsh-mallows, or the like; and, if the patient is accustomed to strong liquors, he may be indulged in small quantities of gin and water, nor will moderate draughts of fine porter be prejudicial.

In the intervals between the fits, the patient should use moderate but constant exercise on horseback if the pains will permit, if not in a carriage; but if either of those motions should occasion extreme pain, as will generally be the case if there is a stone in the bladder, they must be omitted, lest the irritation should bring on inflammation, and dangerous consequences should follow. The first symptoms of gravel or stone should excite us to avoid as much as possible a sedentary life, and direct us to such a regimen as may in all probability prevent the more troublesome progress and fatal events which often follow inattention to early warnings.

During the continuance of a fit, the treatment must be different from that which is proper in the intervals; whilst the pain is

is violent, which is always the case when a stone is detained in the urinary passages, bleeding is necessary; this evacuation both prevents and removes inflammation, and also tends to relax and soften the rigid fibres; and the patient should sit in warm water as high as the parts affected.

The use of clysters is also peculiarly beneficial; when a warm decoction is thrown up, the vapours from it act as a fomentation in relaxing and softening the kidneys, and also clear the intestines both of wind and of dry and hardened excrement, which usually prolong, if they do not bring on the fit. For the composition of the clysters the following form will be proper.

Take of the common decoction for clysters, half a pint—of the balsam of capivi mixed with yolk of egg, two drams—castor oil, two ounces. If the pain is great, add from twenty to thirty drops of liquid laudanum.

After bleeding and clysters, diuretic medicines may be given; but they should be such as are emollient and oily, and not of the forcing kinds; and, if vomiting occurs as a symptom, opiates may be added to the diuretics after it is abated, but not before.

The following prescriptions are offered, as adapted to most cases where diuretics and opiates are necessary.

For a common drink—

Take of common emulsion, in which a double quantity of gum Arabic hath been dissolved, one pound and half—of white wine, four ounces—of syrup of marsh mallows, two ounces. Mix these ingredients well.

Or, take of the common emulsion as above, one pound—of poppy syrup, ten drams.

The following draught is also recommended.

Take of barley-water, one ounce and half—of compound juniper water, two drams—

oil of almonds, and mucilage or jelly of gum Arabic, and syrup of marsh mallows, of each two drams—sweet spirit of nitre, thirty drops. Mix together for a draught.

Vomiting is rather useful, helping to prevent the cohesion of the gravel, and to promote it's expulsion, so that it ought by no means to be suddenly checked; but if it should become so extremely troublesome that it should be necessary to correct it, let the patient discharge the stomach of it's contents by a few draughts of warm water and camomile tea, and then give a saline draught in the act of fermentation, a few minutes after which the following may be administered.

Take of the vulnerary balsam, thirty drops—of liquid laudanum, twenty drops—of common mint water, one ounce. Mix for a draught.

Or the following draught may supply the place of both the foregoing.

Take of simple common mint water, one ounce—of fresh lemon-juice, half an ounce—of salt of wormwood, one scruple—of the vulnerary balsam, thirty drops—of liquid laudanum, twenty drops—syrup of marsh mallows, one dram.

If the urine should appear tinged with blood, a symptom which sometimes attends the gravel, an ounce of manna may be dissolved in a quart of common milk-whey, and taken at several different draughts at convenient distances; and a slice of lemon sucked now and then will quicken it's operation, and occasion it's sitting more easy on the stomach: if this medicine should disagree, a decoction or infusion of senna will answer the purpose, and this should be repeated twice a week, as it tends to abate the pain and lessen the discharge of blood. If the bloody urine comes from the bladder, external applications, such as bladders of warm water, or other fomentations, will be useful.

But in every other case of gravel and stone, the castor oil is to be preferred to all other purging medicines; and whether gravelly symptoms are produced by stone, or by any other cause of inflammation, emollient lubricating medicines are necessary after bleeding, and the oil of which we now speak, tends in a peculiar manner to these ends, by relaxing the passage for the stone to pass from the kidneys to the bladder; and the castor oil taken in the fit, and soap-lye at proper intervals, are recommended as equal in efficacy to any medicines in use for the cure of these diseases.

The soap-lye must be taken at first in small quantities, such as from ten to thirty drops in a dose, in half a pint of veal broth or new milk; increasing the proportion of lye as long as it will continue on the stomach, and not prove troublesome by excoriating the urinary passages.

Soap and lime-water have been also approved as medicines for these diseases; the soap must be Spanish, and the lime-water prepared from sea shells; of the soap not less than an ounce in twenty-four hours, swallowed in any manner the patient can get it down, and at least two quarts of the lime-water, taken within the same space of time, will produce any considerable good effect. The best way of taking these medicines, will be to divide the soap into three portions, and the lime-water into four, and to give one of the soap, washing it down with the portion of lime-water, early in the morning; the second dose of each between breakfast and dinner, as distant as possible from each meal; the third under the same regulation, between dinner and supper; and the fourth part of the lime-water at any time of the day that the stomach seems best disposed to receive it.

But though such considerable quantities of these medicines are necessary to favour expectations of a cure from them, yet the stomach should be inured to them by degrees; small quantities should be given at

first, and gradually increased; and even the strength of the lime-water should be lessened by mixture with pure water, or by making it from lime which has already had one water prepared from it; and this also may by degrees be given more and more strong, not only till the patient can bear the first water, but even that which has received the additional strength of being again thrown on fresh lime.

And after all, a very sudden amendment is not to be expected from these medicines; many persons have persevered in the use of them months, and even years, before they have derived any considerable benefit from them, and yet they have at last effected a cure; indeed it can hardly be conceived that a stone of any considerable size will be dissolved by medicines of any kind, but after long use and frequent repetition.

There are also other remedies of a less violent nature, which are said to have produced very happy effects in these diseases; such as an infusion of the seeds of wild carrot in boiling water, which must be made of a degree of strength proportioned to the violence of the complaints, and being strained or poured off fine, and sweetened with honey, should be taken to the quantity of a quart or three pints in twenty-four hours, in such draughts and at such times as are most agreeable and convenient.

The following has also been highly recommended.

Boil thirty berries of raw coffee in a quart of water, till it is of a deep greenish colour. Of this take from six to eight ounces every night and morning, adding to each dose ten drops of the sweet spirit of nitre.

The plant *uva ursi*, or bear's whortle berry, bear's whorts, or bear's bilberries, is also celebrated as a cure for these complaints, as well as for ulcers in the urinary passages; half a dram of powder made from the dried leaves, is directed to be taken in the morning fasting, or the same quantity two or three

three times a day: this medicine is probably less efficacious than the soap and lye, but it is also much less disagreeable.

But as there are also a great variety of simple remedies, which have each it's advocates, and the use of which may in many instances be attended with success, and therefore ought to be tried where the medicines we have prescribed are not at hand; we have selected such as have been known at least to alleviate the pains of these disorders, and perhaps to have prevented their progress.

Decoction of the herb agrimony, boiled in water about ten minutes, sweetened with honey, and taken morning and evening in the quantity of half a pint at each time.

Drink a pint of warm water every day just before dinner; if one stone should be discharged, it is said this course will prevent another from forming.

Slice a large onion, pour half a pint of warm water on it; let it stand twelve hours, then pour off the water and drink it: repeat this every morning.

When the fit is violent, beat raw onions to a pulp, and apply poultices of them to the bottom of the back and the groins.

Take a large onion, cut it into slices, and calcine it in a fire-pan till it becomes white ashes. Of these take a tea-spoonful morning and afternoon in a glass of white wine.

Boil one ounce of common thistle root, and four drams of liquorice, in a pint of water, and drink half this quantity every morning.

Drink plentifully of water in which turnips have been boiled and pressed, sweetened with honey.

There is also another disorder, which though not precisely of the same kind, yet bears so near a relation to complaints of stone and gravel, that it may be proper to mention it in this place.

This is the *stone in the gall-bladder*, which is not of the nature of the abovementioned concretions, being the bile hardened into lumps; and these are, for the most part, found in the gall-bladder, though they are also often met with in the common gall-duct.

These gall-stones sometimes lie so quiet in the gall-bladder as never to occasion any indisposition, or to be known to exist, till they have been discovered after death by dissection; but if they are detained in their passage through the gall-duct, they also in general obstruct the passage of the gall into the intestines, which occasions many other disorders.

The symptoms of this disease are uncertain, resembling in many cases so nearly those of other disorders, that it is difficult to ascertain it; yet the following signs usually attend this of a stone in the gall-bladder.

A loss of appetite, a sense of fulness and distension of the stomach; sickness, vomiting, languor, inactivity, want of sleep; and if the obstruction continues a few days, a wasting of the flesh; the eyes, skin, and urine become yellow, and the excrement of a whitish colour; and, above all, the most certain symptom is, that the pulse is not affected by the pain, which is excited by obstructions of the gall-ducts from stones passing through, but continue as when the patient is in perfect health.

The pain is in some cases extremely acute, in others slight, and the degrees of the yellowness and other symptoms, as well as the duration of them, are various; but however violent the pain may be in this disorder, it admits of speedy relief from medicine, and is seldom attended with much danger.

If the pain is intense, opiates should be administered as soon as the patient complains, and this in pretty considerable quantities, such as twenty or thirty drops of liquid laudanum, in a glass or tea-cupful of the patient's common drink, which must be

be repeated at proper intervals till ease is procured.

The vomiting which usually accompanies this disorder, is to be considered as an effort of nature to dislodge the gall-stones, and should therefore be encouraged; and even if this symptom does not appear, it will be right to give a gentle emetic, and repeat it if necessary, administering an opiate immediately after it's operation: purging medicines will also answer the same end as vomits; but such should be chosen as act with ease, and may be continued with the greatest safety; such as castor oil, sea water, the water of purging springs, or neutral salts; and these may be repeated every day, if necessary, for a length of time,

intervening now and then a moderate dose of rhubarb.

Among the simple medicines recommended for the cure of this disease, the juice of grass in the spring seems to have obtained most credit; it may be taken in the quantity of a table-spoonful in any common drink, or be made into a syrup with sugar.

It may be right to caution our readers to lie with their heads, and the upper parts of their bodies, considerably higher than the lower parts, for thus the urine is not detained in the kidneys long enough for the concretion of the earthy or tartarous parts.

CHAP. XXXIV.

Of Hæmorrhages or Discharges of Blood.

VOLUNTARY discharges of blood are salutary, when no inconvenience is observed to arise from them, for then the habit is one way or other relieved; in acute disorders they are frequently critical, and ought by no means to be stopped, and there are but few spontaneous hæmorrhages that would prove fatal if no means were used to check them; much more dangerous consequences are likely to arise from stopping them injudiciously, than by suffering the blood to flow till it ceases of itself, provided the discharges be not immoderate, or continued so long as to endanger the patient's life; all, therefore, which ought to be attempted, is to check their violence, and watch attentively that they do not become so excessive as to occasion immediate danger, or so frequent as to produce dropsy, hectic fevers, or consumption.

The seats of *spontaneous hæmorrhages* are generally where the vessels are tender,

and not braced up by adjoining or covering membranes; such as the nostrils, the branches of the lungs, the gums, stomach, that intestine which is called the *ileum intestinum*, the extremity of the strait gut, the womb and passages from it.

Those who have too much serum or thin humour in their blood; those who lead sedentary lives, or whose perspiration is defective; and such as eat more than they can easily discharge, and particularly if the food is of an acrid or irritating quality; are most liable to involuntary discharges of blood: and these discharges are generally from the nose in young persons; from the lungs in those who are advanced to manhood; beyond that period, the piles frequently occasion a considerable loss of blood; and whenever it occurs in old age, it is generally from the urinary passages.

The causes are not always either a redundancy of the blood, or it's acrimony or thinness;

thinness; it may be occasioned by an irregular circulation which happens when the parts remote from the heart are, by obstructed perspiration, or any other stricture, so braced up, that the blood cannot easily return through the veins; but those hæmorrhages that are symptomatic, may be produced by obstructions, or hardness of the vessels and internal parts, which may put a stop to the free circulation of the fluids, and impel too great a quantity to particular parts: voluntary discharges of blood may likewise proceed from an inflammatory disposition of that fluid, or from it's being in a dissolved state; which is the case in all putrid disorders, where those discharges are very common; in particular in the malignant small-pox, putrid and malignant fevers, the dysentery, and the scurvy, when it is in a very high degree.

Hæmorrhages may also be occasioned by an excessive use of strong medicines, to procure evacuations either by stool or vomit; from such medicines as have a tendency to a dissolution of the blood, such as volatile alkaline salts, cantharides, or the like; by violent bodily exertions, or unusual postures; and by vehement agitations of the mind, the effects of which have been sometimes instantaneously fatal.

The best remedies, if the discharge is internal, are a cool air, rest of the body, and quiet of mind; a sparing mild diet, the food chiefly fruits, vegetables, and spoon-meats; the liquors small, diluting, and emollient; and both taken in small quantities at a time; if the blood has a putrid tendency, acids may be plentifully administered; and in all cases, where it is necessary to stop the discharges, opiates

may be given in small doses, and the body kept open by a very moderate use of Glauber's salts, or a tea-spoonful of the lenitive electuary now and then. Rubbing the lower extremities with warm flannel cloths, and bathing them in warm water, will also be useful; and where the cause of the hæmorrhage is an obstruction of perspiration, it must be removed in the usual manner, by keeping in bed, drinking warm diluting liquors, and promoting gentle sweats.

If the disorder is symptomatic, or arises from some other disease, that must be removed before the hæmorrhage can be stopped; and in acute disorders, when these discharges are but small, and cease of themselves during the continuance of the distemper, it may be apprehended that the cure will be at least tedious, if it is effected without considerable danger.

Persons rarely die of hæmorrhages except any of the large arteries are divided; those who suffer a very great loss of blood generally faint, and then the discharge ceases: in such cases all that ought to be done is just to support the patient's life, by giving him frequently small quantities of broth, and waiting till the divided vessels contract themselves and join; cordials, given with a view to recover patients from such faintings, instead of restoring the lost quantity of fluids, occasion the loss of more blood, by increasing the action of the vessels upon the remaining contents. It has been advised by very eminent physicians to leave all internal hæmorrhages to nature, for in general the patient's life is not in danger, if he is permitted to faint.

C H A P. XXXV.

Of Discharges of Blood from the Nose; of spitting and vomiting Blood; and of bloody Urine.

BLEEDING at the nose is a frequent complaint in lax spongy habits, and where the vessels are small and numerous: lean persons are not so subject to it as fat; but when it happens to the former, it is generally very copious. Persons whose livers or other internals are schirrous and weak, are liable to frequent and profuse hæmorrhages from the nose, and so are those who are afflicted with dropsies.

The causes are such as have been assigned in the preceding chapter, and in each particular case may be discovered from the constitution and habit of body.

Bleedings from the nose are frequently preceded by a degree of quickness in the pulse, flushes in the face, heaviness of the head, dimness of sight or a kind of mist before the eyes, heat and itching in the nostrils, and a pulsation or beating in the arteries of the temples; and they are generally accompanied, in common with other hæmorrhages, by a straitness of the skin and external parts, a shivering, weariness in the limbs, pains in the belly, and costiveness.

In many instances these discharges of blood are salutary, and relieve those who labour under intense head-achs, vertigos, bad sight, or even epilepsy. In most inflammatory disorders, whether in the head or of the intestines, they are generally serviceable, and are often beneficial in partial inflammations, such as gout or rheumatism: but those who in childhood are subject to suffer considerable losses of blood from the nose, will, as they advance in life, feel themselves liable to rheumatism, piles, stone, and colic.

Before attempts are made to cure, it will be right to consider the cause of this dis-

charge with great attention, and reflect that it is much oftener attended with advantage than injury; and that it is in many cases an effort of nature to part with such a quantity of diseased blood as would require to be drawn off by the lancet, in order to remove some present or threatened distemper.

This is the case apparently in inflammatory fevers; and even when it happens to persons in health, it will be right to let it take its course, especially where a fulness of blood, a sanguine habit, and a florid countenance, indicate the probability of its preventing some dangerous disease.

Periodical bleedings at the nose should by no means be stopped, at least not until the patient is much weakened by them; an apoplexy or lethargy will be the probable consequence of checking a discharge, which by its certain return is evidently necessary.

When, however, these discharges proceed with violence, and continue so long as to bring the patient's life into danger, which will be the case if the pulse droops, his lips grow pale, and his extremities cold, and he complains of sickness, or is seized with cramps or hiccups, immediate endeavours must be used to prevent fatal effects.

For this purpose ligatures or bandages should be applied to the bendings of his arms, at the elbow, and at the wrists, and the garters should be tied somewhat tighter than usual; but all these bandages should be loosened as the flowing of the blood stops, and gradually removed when there is no longer an immediate apprehension that it will recommence.

If these methods fail, bathe the feet, legs, and hands, in warm water, and administer

nister a moderate dose of Glauber's salts immediately ; and let the following draughts succeed it's operation.

Take of pure water, one ounce—of nitre, half a scruple—of syrup of poppies, three drams. Make a draught, to be repeated every third or fourth hour.

Let the patient snuff vinegar, or vinegar and water, up his nostrils, or dissolve a small quantity of blue vitriol in a glass of tincture of roses; dip a dossil of lint in this mixture and introduce it into the nostrils; or a like quantity of the tincture of roses, with about twenty drops of the weak spirit of vitriol, may be given internally, if the bleeding remains unchecked by any of the foregoing means.

Should these applications prove alike unsuccessful, and the complaint still continue with violence, the following method is recommended to stop the blood.

Take a piece of strong sewing silk well waxed, and fasten to one end of it a dossil of lint; then take a piece of catgut (about the size of a second string of a violin) and introduce it up the bleeding nostril; when it is perceived in the mouth, take hold of it's end with a forceps, and draw it gently to the lips; there fasten the end of the waxed silk to it, and withdraw the catgut back again by the end which remains at the nostril till you get at the silk, which you may take hold of, and pull the dossil of lint into the posterior nostril, or the aperture into the back part of the mouth, after which stuff the external nostril with lint, and the blood will be effectually stopped. These dossils must be suffered to remain a day or two, and then removed carefully.

This method is peculiarly necessary when the blood falls into the mouth as sometimes happens, and bursting afresh, after it has been supposed to be stopped, during the patient's sleep, passes into his throat and threatens suffocation.

The powder of burnt cork to be snuffed

up the nostrils is also recommended as efficacious in stopping the blood, and cloths dipped in cold water and applied to the back part of the neck and between the legs is very often successful.

Where the bleeding at the nose returns frequently, and weakens the patient considerably, the following medicines have been prescribed.

Take of compound amber powder, one scruple—of nitre, half a scruple—balsamic syrup, enough to make a bolus. To be taken going to rest.

Or, take of the decoction of Peruvian bark, one ounce and half—of tincture of Japan earth, two scruples—of liquid laudanum, four drops—simple syrup, one dram. Make a draught, to be taken every four or six hours, according to circumstances.

Or, take of burnt alum powdered, half a scruple—of dragons blood powdered, one dram—simple syrup, enough to make these ingredients into eighteen pills, three of which may be taken twice or thrice a day.

Or from twenty to forty drops of tincture of antimony taken in a glass of wine, or wine and water, three or four times a day, may effectually answer the purposes of the foregoing prescriptions; and more especially if the disease proceeds from a thin dissolved state of the blood.

And certain precautions are necessary for those who are subject to these discharges, in such a degree as to be attended with loss of strength and to occasion dejection of spirits; they should be attentive to guard against taking cold, and especially by keeping their feet from the wet, and wearing warm stockings; they should also frequently bathe their lower extremities in warm water; they should forbear intense study, and particularly hanging down the head to read or write; ligatures round the neck are also injurious; and all stooping or bending postures should be avoided.

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The diet must be regulated by the habit and constitution of the patient, and the apparent nature of the disorder; if he appears to be too full of blood, light food, diluting liquors, and cooling purges will be necessary; if, on the contrary, the disease seems to be occasioned by any tendency to putrefaction, comfortable and nourishing food and cordial drinks will be most proper.

Spitting of blood, called also *hæmoptoe* and *hæmoptys*, is properly a discharge of blood from the lungs; and it may be occasioned by various causes, such as accidental ruptures of the vessels, the degree of danger attending which is always proportioned to the size of those vessels, but in all cases the patient's being kept quiet, or otherwise, will lessen or augment the violence; by ulcers in the lungs, when the blood is forced up in coughing mixed with phlegm or matter, in which case the danger is considerable, as this appearance denotes injury to some large vessel; or from ruptures of the bronchial or pulmonary arteries.

It may also be brought on in either of the foregoing cases by extravagant passions, and great strain and labour of the body; by weakness of the vessels, over fullness of blood, excesses of drinking, violent exertions of the voice, and intense thought.

Or it may be produced by wounds and bruises, external or internal; by solid bodies accidentally getting through the windpipe to the lungs; by diseases of the lungs; by a long continued dry cough; by the stoppage of any other evacuation of blood, either the periodical discharges of women, or the bleeding piles in the other sex; by hectic fevers; by intense heat or cold; or by air so rarified as not to admit of the free motion of the lungs.

People who indulge in violent passion, those of weakly habits and of slender makes, with long necks and flat breasts, and those who in the early parts of their lives have

been subject to bleedings of the nose, are most liable to this disorder.

The patient should be kept cool in body, and quiet in his mind; his diet should be nourishing, but soft, mild, and light; his liquors preparations of milk, barley-water, or infusions of the emollient herbs; but both his food and drinks should be adapted to his strength and the symptoms: in some instances he must be kept extremely low, in others a more generous regimen may be necessary, but in all cases spirituous and fermented liquors should be avoided, or at least used so very sparingly as not to risk the rarifying of the blood; he should be enjoined to speak as little as possible, and when it is necessary, in so low a tone of voice as not to disturb the vessels of his lungs; and all his liquids should be taken cold, and in very small quantities at a time.

Spitting of blood is in some cases symptomatic: in pleurifies and inflammations of the lungs it is rather useful than prejudicial; but in dropsies, scurvies, consumptions, and the like, it is attended with danger, because in those cases it proceeds from ulcers in the lungs.

When this disorder attacks persons of robust habits and strong constitutions, it is seldom attended with much danger; but in the weak and feeble, the cure is extremely difficult, and not often effected: when it proceeds from an ulcer it is frequently fatal.

The preceding symptoms of a spitting of blood, are pain, weight, and anxiety about the breast; a difficulty of breathing; an oppressive rambling pain in the stomach; wind; hoarseness; a dry and tickling cough; shiverings; coldness of the extremities; weariness; and pains in the back, loins, and limbs: as these symptoms denote a stricture on the vessels, and a disposition in the blood to inflammation, so they are commonly forerunners of a copious discharge of that fluid. Sometimes the discharge, when

when it hath not laid any considerable time on the breast, will appear thin and florid; if it hath remained there long, it will be thick and blackish, and in some instances it comes away in a kind of froth with a short cough, and in this case the patient has a degree of fever, which abates with each discharge of blood, and returns at intervals during the continuance of the disorder.

As we have already observed, this discharge is in many instances a favourable effort of nature; it ought never, therefore, to be suddenly stopped by astringent medicines, nor even checked by any interposition of art before the patient appears to lose his strength.

When that is the case, bleeding in the arm may be necessary, according to the age of the patient and his state of body, which must also direct how far the repetition of this operation may be permitted; though it should be observed, that it is most adviseable to take away a considerable quantity of blood at once, as one copious bleeding is more useful than several sparing ones.

Glauber's salts in small quantities should be repeated so as just to keep the body in a lax state; or the same purpose may be effected by a tea-spoonful of the lenitive electuary taken now and then, and by infusions of tamarinds, stewed prunes, the pulp of roasted apples, and the like; these acids will be useful if the disorder is attended with heat or fever, as well as lemon or orange-juice, currant-jelly, or a few drops of spirit of vitriol, in the patient's ordinary drink.

Great reliance may be placed on nitre if taken early in the disease, and the following method is adviseable.

Take of nitre, half an ounce—conserve of roses, four ounces. Mix to an electuary, and take the quantity of a nutmeg every third, fifth, or sixth hour.

Tincture of roses, taken in the quantity of a wine-glassful every third, fourth, or sixth

hour, according to circumstances, is also recommended; and conserve of roses, either alone or made into an electuary with balsamic syrup, and a small portion of the syrup of poppies, may be taken to the amount of several ounces in the twenty-four hours.

Ligatures, as directed for bleeding at the nose, may also be found useful, and in general nearly the same astringents, if from alarming symptoms they should be required.

Opiates may also afford relief, especially if the discharge of blood is promoted by a troublesome cough, and the storax pills, or liquid laudanum, may be given in such doses as may just serve to allay it; and bathing the lower extremities in warm water will also assist in giving ease to this symptom.

Some have advised the gums and nitre in the following composition.

Take gum Arabic powdered, compound powder of gum tragacanth, and powdered starch, of each half a scruple—of nitre, six grains—of gum mastich, half a scruple. Make a powder, to be taken three times a day, and washed down with three or four spoonfuls of tincture of roses without acid.

And the following decoction for a common drink.

Take of candied eringo root, two ounces—of gum Arabic, one ounce—rasped hartshorn, Spanish liquorice, and balsam of Tolu, of each an ounce and half. Boil these ingredients a quarter of an hour in a quart of lime-water and barley-water, mixed in equal quantities. When cold, strain it off, and add to the decoction two ounces of balsamic syrup.

The causes of this disorder will point out the proper means of preventing it, which consist chiefly in avoiding all excess both bodily and mental, and a forbearance from heating, irritating, and acrimonious food, and spirituous and fermented liquors.

Vomiting blood, though not so common a disorder as spitting it, is yet equally dangerous; the blood which comes up in gulps, and is discharged in a fluid state, comes from the stomach.

It proceeds in many cases from the same causes as those which produce bleedings from the nose; and may also be occasioned by the obstruction of female periodical discharges, or by stopping the bleeding of the hæmorrhoidal vessels, or piles; by obstructions in some of the internal parts of the body; by external blows or injuries; or by poisonous matter, or hard and indigestible substances, conveyed into the stomach; and from ruptures of the bronchial or pulmonary arteries.

When the latter is the case, and the discharge of blood is considerable, though the rupture may close up, yet the blood may fall into the bowels and occasion putrid diseases.

If this should happen, the danger will be much greater than when the blood is freely thrown up by vomiting in a florid state; in the latter case the same treatment which we have prescribed for spitting blood will in general effect a cure; but in the former, such methods must be taken as in the approaches of a dysentery or putrid fever.

The symptoms of an approaching vomiting of blood, are generally a swelled or distended stomach, and a sense of oppressive fulness and weight; where the stomach alone is affected there is no cough.

The regimen must be nearly what we have prescribed for the foregoing disorder, and particular care is necessary to avoid every thing strong, acrid, or heating.

If there are evident tokens of inflammation, bleeding may be necessary; but where this disease proceeds with violence, the patient's strength will be too soon exhausted to bear this evacuation; but in all cases the body should be kept open by very gentle laxatives and emollient clysters, and

opiates may be administered in such proportions as we have recommended to those who are troubled with spitting of blood.

Nitre has been also advised in the following forms.

Take of pure water, two ounces—of nitre, one scruple—syrup of poppies, two drams. Make a draught, to be taken every four hours.

For a common drink—

Take of common emulsion, one pint and half—of simple cinnamon water, two ounces. Mix, and dissolve in the mixture three drams of nitre.

Take of compound powder of amber, fifteen grains—of nitre, half a scruple—of camphire, two grains—of simple syrup, enough to make a bolus. To be taken occasionally, with a tea-cupful of tincture of roses after each.

Bloody urine is occasioned by a discharge of blood from the kidneys or bladder; when pure blood is suddenly and copiously brought off without pain, it flows from the kidneys; if the quantity of blood is small, the colour black, and if the patient complains of pain and heat, or either, during the discharge, or after it, it proceeds from the bladder; if a rough stone in passing from the kidneys to the bladder wounds the ureters, great pain is felt in the back, and a considerable difficulty in making water; and the pains are still more acute and severe if the bloody urine is occasioned by the bladder itself receiving injury from a stone, in which case an inflammation and stoppage of urine generally ensues.

Bloody urine may also be caused by strong purges, forcing diuretics, or other violent medicines producing spasms or contractions of the belly; it may proceed from external injuries, such as blows or bruises, from strains in lifting or carrying great weights, or from any violent exercise; and

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it may also be occasioned by a stoppage of the bleeding piles, or from irregularity, or the cessation of the periodical evacuations of women.

It is also sometimes symptomatic, as in the small-pox and malignant and putrid fevers; and the urine is often bloody when it does not immediately appear upon inspection, and this is discoverable by passing it through a napkin, which will be tinged by any bloody particles which it contains.

There is also a species of the piles which discharges itself in the urinary passages, and which is often salutary, as well as those discharges from the hæmorrhoidal vessels which are made externally.

All other cases of bloody urine are attended with more or less danger; but when the bloody urine is mixed with matter, it either proceeds from ulcers in the urinary passages, or from ulcerated or wounded kidneys, which are generally to be dreaded.

Wherever this disease occurs, the patient's diet should be light, soft, and easy of digestion; his liquors of a healing and balsamic quality; and, if ulcers in the kidneys or bladder are suspected, the decoction of marsh mallows and liquorice will be useful as a common drink.

When the disorder proceeds from fulness, or from a suppression of other evacuations of blood, it will be necessary to bleed and keep the bowels open, and both will be still more requisite if there is any tendency to, or actual inflammation: in that case frequent draughts of infusion of lin-

seed will be proper, and small portions of nitre may be dissolved in each draught immediately before it is taken; Glauber's salts may also be given every other day, in such doses as will procure gentle evacuations.

When this disease is occasioned by a stone in the bladder, the patient should rest from labour and exercise, and take a dose of manna dissolved in a pint of milk whey twice a week, and if necessary a few drops of liquid laudanum after it's operation; and if a suppression of the piles hath brought it on, bleeding will be necessary, and moderate doses of the *tinctura sacra*, or sacred tincture.

When a putrescence in the blood and juices produce bloody urine, the bark and acids, and in particular the vitriolic elixir, are immediately and absolutely necessary, and the patient must be treated as directed in those putrid disorders of which it is a symptom.

Of all astringent medicines, the *uva ursi*, or bear's whortle berries, or bilberries, is the only one that ought to be admitted, at least unless the patient's strength seems to be very considerably exhausted, in which case tincture of bark, to the quantity of an ounce divided into three doses, may be taken in the twenty-four hours, each dose in a large tea cup of lime-water.

The *uva ursi*, which is said to be a specific in this complaint, may be taken in such quantities as have been already prescribed in treating of the *stone and gravel*.

CHAP. XXXVI.

Of the Hæmorrhoids, or Piles.

A Discharge of blood from the hæmorrhoidal veins is so named, and this is also called the *open or bleeding piles*;

when there is no discharge of blood, but only hard and painful tumors at the lower part of the rectum or straight gut, the disease

ease is called the *blind piles*; and near the extremity of this gut internally, are little jagged proceſſes, which are the ſeat of the internal as well as external piles.

Thoſe who are of a looſe ſpongy habit, and diſpoſed to live high, eat heartily, drink freely, and uſe little exerciſe, and thoſe who are habitually coſtive, are moſt liable to this diſorder; and it more frequently attacks men than women, unleſs where the latter are equally prone to the beforementioned indulgencies, or are of a bilious or melancholy diſpoſition; pregnant women are peculiarly ſubject to this diſeaſe, from the preſſure on the hæmorrhoidal veſſels.

In other caſes the immediate cauſe is a difficult circulation of the blood through the hæmorrhoidal veins, which may be occaſioned by whatever generates a redundancy of blood, or invites it in too large portions to thoſe veſſels; violent purges of aloes, jalap, and in ſome conſtitutions rhubarb, will bring on the piles; and high-ſeaſoned food, quantities of garlick, ſweet and ſtrong wines, may alſo produce this diſeaſe; which may likewiſe proceed from colds, violent exerciſe on horſeback, ſitting long on a hard ſeat, uſing a neceſſary-houſe built over water, neglect or ſtoppage of accuſtomed evacuations, coſtiveness and hard ſtools, or from any violent agitation of the body or mind.

The *blind piles* appear in the form of tubercles, or little tumors of different ſizes, from that of a pea to an egg; they are diſtinguiſhed from all other tumors about the fundament by their colour, which is livid or black, and by their reſiſtance to the touch, feeling when preſſed with the finger like bladders filled with water, which circumſtances are not obſervable in other tubercles about that part, ſome of which are ſoft and not painful, and others are hard, painful, and have an inflammatory appearance.

The blind piles generally attend full and coſtive habits, pregnant women, or thoſe

who have ſuffered in ſevere labours, or are irregular in their periodical evacuations; the blind piles ſometimes occaſion ſuch ſpaſms or contractions in the fundament, as to render ſitting difficult, and the adminiſtering a clyſter actually impoſſible, and even in ſome caſes give riſe to a fiſtula. If theſe blind piles burſt, which ſometimes happen, they form the bleeding or open piles.

The burſting out of the hæmorrhage in the *open piles* is generally preceded by contractions, ſtrictures, flatulencies, pain about the very lower extremity of the back-bone, near that which is called the *os ſacrum*, and a general indiſpoſition of the whole frame.

When this diſorder begins to grow exceſſive, the diſcharge is black and clotted, afterwards it appears more red and florid, at length it becomes thin and ſlimy, and in this ſtate the ſtrength is impaired; and if no check can be given to the diſeaſe, the pulſe fails, or is languid and trembling, and the termination is a hectic fever or a dropſy.

But we deſire it may be underſtood, that we do not conſider moderate diſcharges from the hæmorrhoidal veſſels as a diſeaſe; whiſt they continue within due bounds they unqueſtionably give relief to the conſtitution that is oppreſſed by aſthma, gout, ſciatica, diſeaſes of the bladder or kidnies, hypochondria, hyſterics, and madneſs, and even ſome acute diſorders, ſuch as colic and inflammatory fevers.

But when the patient is enfeebled, when he loſes his appetite, or the powers of diſgeſtion fail; it will be neceſſary to put a ſtop to the violence of the evacuation, and to ſuch caſes our future directions and preſcriptions are pointed, which muſt alſo be regulated by age, ſtrength, habit of body, and other circumſtances; though the effect it has on the patient's ſtrength will always be the beſt guide, for whiſt that continues unimpaired, it may be attended with as many ill conſequences to ſtop the diſcharge as to ſuffer it to proceed without endeavours

to restrain it after the patient's constitution apparently suffers by it.

When these discharges after a certain time cease of themselves, and return periodically, they ought to be considered as salutary efforts of nature, and should by no means be stopped or checked by art.

When, however, from their immoderate quantity and long continuance, attention to them becomes necessary, our first care should be to regulate the patient's diet, and for this purpose he should be directed to abstain from all flesh meats, or at least from all such as are heavy or hard of digestion; and his food should be chiefly broths, sago, panada, and other spoon-meats; and his drinks milk and water, whey, chalybeat waters, or decoctions of mucilaginous herbs, or those which are of an astringent quality; such as the roots of tormentil, snake-weed, or marsh mallows: an incautious use of high, heating, and otherwise improper food, and spirituous or fermented liquors, will render the best medicines ineffectual. He who would restore his health, and preserve it in future from the attacks of this disease, must observe attentively, and avoid what appears to have occasioned it, and whatever may tend to increase it.

Bleeding may be necessary in the blind piles; and especially where the patient's habit is gross or sanguine, the body should be kept open, and cooling diluting liquors may be taken freely.

For opening medicines, the following will answer the purpose better than most others.

Take of the electuary of cassia, two drams—of nutmeg water, one dram and half—pure water, two ounces. Make a draught, to be taken in the morning fasting.

Or, take of lenitive electuary, one ounce—flowers of brimstone, and nitre, of each one dram—syrup of roses, sufficient to make an electuary, of which the quantity of a nutmeg may be taken night and morning.

To make the electuary of cassia.

Take the laxative syrup of roses, and the pulp of cassia fresh extracted, of each three ounces—of manna, one ounce—of the pulp of tamarinds, half an ounce. Warm the syrup, and having rubbed the manna in a mortar, dissolve it in the syrup, then add the pulps, continuing the whole over a slow fire, and stir it to the consistence of an electuary.

Castor oil may also be given in this disease to keep the body open, and is perhaps equal to any other medicine that can be offered for this purpose: clysters of the most emollient kind, if they can be injected, will also be useful; but where the swelling will not admit of their being administered, vomits have been advised, though we would rather recommend a reliance on gentle opening medicines.

Common fomentations will afford ease, and in case the bleeding is considerable the following.

Take of the flowers of roses, two handfuls—of elder flowers, one handful—of red Florence wine, one pint and half. Boil it very gently till it is reduced to a pint.

Or, take of simple lime-water, eight ounces—of liquid laudanum, six drams. Both these must be applied moderately warm.

If the piles are external and do not bleed, and the swelling is troublesome, sore and inconvenient, the following ointment is recommended.

Take of elder ointment, one ounce—of white wax, one dram—of sugar of lead, rubbed with a small quantity of oil, two scruples. Mix well together, and anoint the part lightly.

Or, take of the ointment of marsh mallows, one ounce—of sugar of lead, half a dram—opium and camphire, (the latter dissolved with oil) of each ten grains—emollient ointment, sufficient to mix the ingredients to a light and smooth consistence.

But perhaps the steam of warm water, or common poultices of white-bread and milk, may relieve those complaints more speedily than either of the last mentioned compositions: if they should still continue obstinate, leeches may be applied to the part, or the tumors must be opened with a lancet, in which latter case the assistance of a surgeon will be necessary; but before this step is taken, cloths dipped in warm spirits of wine may be tried, which we have often known to succeed when many other external applications have been used without effect.

As this is a disease so common that few people escape it in some part or other of their lives, it may be right to repeat our caution not to attempt stopping the bleeding hastily, nor without due consideration; till the discharge becomes excessive it is generally salutary, nor is it attended with the smallest degree of danger till the patient's strength is so far exhausted as to threaten hectic disorders, an atrophy or wasting of the flesh, or a dropy, in one of which ways this disorder generally terminates when it proceeds great lengths unchecked.

Nor will it be improper to mention a few of those common remedies which are constantly within reach, when some of the foregoing may not be at hand; and which, though we cannot advise the same dependence on them, it will be prudent in such cases to try before better assistance can be obtained.

Boil brook-lime in a small quantity of water, beat it smooth, and apply it warm as a poultice to the part.

A large onion skinned, and beaten or bruised, or roasted in the ashes, and then reduced to a pulp, and applied as a poultice.

Sit over the steams of vinegar wherein red-hot flint-stones have been quenched.

Light a bundle of matches, throw them into a deep pan, and as soon as the flame is extinguished sit over the smoke.

Take from one to two drams of flowers of brimstone twice a day in a cup of whey or new milk.

Express the juice of green nettles, make a syrup of it, and take from one to two ounces in a day. This is recommended for the bleeding piles; but in the using it, regard should be had to the above cautions.

The approach of this disease may in a great measure be prevented by attention to food and liquors; by keeping the body open; and by avoiding colds, and particularly such as are taken by putting on linen, or those garments which are nearest the part, in a damp state; by sitting long on a cold or damp necessity, and by wearing too thin cloaths about the lower parts of the body.

C H A P. XXXVII.

Of Aneurisms.

An *aneurism* is a tumor filled with blood, arising from the coats of an artery being either dilated or ruptured; arteries only are the seats of this disorder, and any

artery in any part of the body may be affected in this manner.

Though this disorder is in general the subject of an operation of surgery, yet it will

will be of use to acquaint our readers with the general nature, description, and symptoms of it, and with the treatment necessary previous to the operation, or when the patient is so circumstanced or the disease so situated that it cannot be performed: where we may despair of prescribing means to effect a cure, it will still be our duty to point out such as may alleviate the misery or prolong the life of the sufferer.

Aneurisms are described to be of several different kinds, but we shall confine ourselves to the *true* and the *false*, as comprehending most of the other distinctions.

The *true aneurism* is formed by a dilatation of the artery; it may happen in any part of the body, but most frequently is found in the bending of the *aorta* or great artery proceeding from the left ventricle of the heart, from which bending it runs upwards along those arteries which rise to the head, generally increasing, till by the great distension it bursts, and the patient dies.

The degrees of the dilatation or stretching of the *aorta* in these cases are various: in some the curve or bend of the artery hath been so enlarged as nearly to fill the upper part of the breast; and it is somewhat extraordinary, that the weakest spot of the vessel, and where the disease begins, is apt to be stretched more in proportion than the other arteries, and to form particular cells, more where it meets firm resistance than where the support is soft and yielding.

The sac, or bag formed by the distension of the artery, is not a distension of one particular coat, but of the whole substance of the vessel; but as the thickness of the coats of these sacs or bags will only last to a certain period, so when these coats will admit of being stretched no farther, the circulation grows languid, the bag becomes thinner at it's point, and soon after bursts; and as this tumor increases in size, the coats will be affected according to the resistance it meets, and where it presses against hard substances, such as tendons or

bones, will be much sooner reduced to thinness, than where it is only resisted by fibrous or more yielding parts.

The *false aneurism* is formed by a rupture or wound in the coats of the artery, and commonly happens in the arm after bleeding; in this case the blood flows out of the artery, and extends itself in the interstices of the firmer parts, and without much pulsation forms a tumor nearer to the surface of the skin, or deeper, according to circumstances; and the progress of the blood, as well as the size of the tumor, will vary according to the size of the artery which is open, and the strength of the circulation.

The causes of aneurisms are various. The *true aneurism* may proceed from a natural weakness in a particular part of an artery, and both kinds from some or other of the following: coagulations or concretions of blood which may occasion a glut in a particular part; an impetuous circulation or a fullness of the arteries in concurrence with some sudden and violent motion or other known cause; an internal abscess or tumor pressing on some part of an artery; violent action of any kind, whether of the body in great exertions of strength and unaccustomed exercise, or of the mind in excess of the passions of anger, or the like: aneurisms may also be occasioned by external injuries, such as strains, blows, or wounds with any pointed instrument; or by straining in vomiting, lifting great weights, or suspending the breath in running or swimming.

It is by no means easy to ascertain the existence of internal aneurisms till they approach to the surface of the body, the symptoms produced by the disease, before it begins to form an external tumor, being such in general as may be occasioned by other causes; in one remarkable circumstance they are distinguishable, which is a perceptible pulsation in some part of the tumor, which is more or less sensibly felt, as the seat of the disorder is superficially or deeply seated.

feated: the true aneurism is generally of an oblong figure, the pulsation of it is violent, and it gives way or subsides on depression whilst the blood continues fluid, but when it is coagulated, the effect of pressure is less visible; if the aneurism is of the aorta, the pulsation is strong against the breast-bone and ribs on every contraction of the heart, and when it reaches above the breast-bone, the tumor and pulsation are more apparent.

These tumors do not alter the colour of the skin, except when they are very near bursting, nor are they accompanied with pain: if the narrow part of the sac or bag is towards the orifice of the artery, the blood on pressure will re-enter the artery with a kind of hissing noise; and if the parts are expanded beyond their capacity, or the blood begins to putrify, there will be an external appearance of redness, attended with a degree of fever and faintness.

The common appearances of aneurisms, occasioned from arteries being wounded with the lancet in bleeding, are a discharge of blood through the orifice of the skin by starts and jerks instead of an uniform stream, and upon the external orifice being stopped or closed, an insinuation of the blood among the muscles as far as it can spread in the shoulder and arm, which in this case become livid, and the blood coagulating prevents any sensible pulsation.

The aneurism of the aorta may prove fatal in a variety of ways: as it increases in size, the health becomes more and more impaired by it; it may continue many years, and that without very great apparent in-

jury; but a cure is scarcely ever to be expected, though some few instances have occurred where small aneurisms, and in particular such as have been occasioned by punctures of the arteries in bleeding, have been entirely removed by the use of bandage.

If this should not succeed, as is too generally the case, the only hopes that remain are from the operation, or from palliatives; where, from the depth or situation of the aneurismatic tumor, the former cannot be attempted, life may be considerably prolonged, and the patient escape from any violent degree of pain, by the use of a very moderate diet, and constant but extremely gentle exercise; his bowels should be kept open, and his mind as well as his body indulged in all possible quiet.

Perhaps bathing the part with some volatile spirit may afford temporary relief; but in most cases, of the aorta in particular, bandages must be avoided; in others, where pressure is used, it should be only such as may check the force of the blood, and not actually resist it; and for this purpose woollen cloths that will stretch considerably, such as worsted stockings, or the like, are most proper: if the tumor forces its way through the integuments and loses its support, the assistance of a bandage is immediately necessary, as the only means to prevent a fatal hæmorrhage.

It is foreign to our present purpose to describe the nature and process of the operation, it requires the best attention of an able surgeon; nor are the united efforts of skill and care sufficient to render it always successful.

C H A P. XXXVIII.

Of Want of Appetite, Indigestion, Vomiting, and Costiveness.

WE have thrown these several complaints together in the same chapter, because they in some measure arise from and are dependant on each other; and because the regulations, medicines, and remedies, will be for the most part similar.

Want of appetite, or loathing of food, may be an original or symptomatic disease; in the former case the causes are a bad diet, bad air, want of exercise, or habitual voraciousness or over-feeding; it may also be occasioned by surfeit, indigestion, violent passions, hard drinking, or immoderate use of spirituous liquors, snuff, tobacco, tea, or opium.

But it is also a common symptom of fevers and most other diseases, and in those cases the cure depends on the removal of the disorders by which the complaint is occasioned.

When we consider it as an original disease, air and exercise are the first remedies to be applied, and in general contribute more to the restoration of a lost appetite than the best medicines; but it is not a bare change of air or indiscriminate motion that can be expected to effect this purpose; the patient's removal ought to be to an elevated situation, and where he may enjoy an open and somewhat sharp as well as dry air; and his exercise should be constant, taken as much as possible abroad, and in such degrees as not to occasion fatigue, which will rather weaken his appetite than encourage it. The sports of the field, moderately taken, are of all kinds of exercise best calculated to remove the complaint of which we speak, as the attention is in general called off by them from care and intense thought, and the spirits are cheered and exhilarated, than which nothing tends

more to the recovery and promotion of appetite.

The diet should be light and nourishing, consisting principally of young animal food, accompanied with vegetables: he who would wish to recover and preserve his appetite, must banish poignant sauces and spices from his table, and confine himself to plain roast and boiled; many a good stomach has been spoiled by ragouts and fricasees; but we may venture to assert, that the art of medicine does not extend to the restoring a vitiated appetite whilst it continues to be tempted with high food and luxurious living.

Nor must we be less careful in the use of wine and other fermented liquors: of the former a small quantity may be necessary, particularly to those who have been long habituated to the use of it; but it should be taken as a cordial, and not swallowed as a potion, which is actually the case with those who drink to excess, and whose stomachs often refuse the dose which the tyrannic wine-bibber insists on it's receiving.

We must also caution all such as feel a loss of appetite, as well as those who wish to avoid this complaint, against the use of hot punch, and other warm liquors of any kind, all which tend to relax the stomach, and bring on a variety of disorders; and under this head we might proceed to speak of tea, but the consideration of an article which is now become so very important, as well as of snuff, tobacco, and opium, must be reserved for a subsequent part of the work.

If the stomach is oppressed with a sense of weight, a vomit of ipecacuanha will be necessary, after which the following course

of medicine will, with due regard to regimen, in most cases effect a cure.

Take rhubarb powdered, and salt of wormwood, of each one dram and half—balsam of Peru, enough to make twenty-four pills, four of which may be taken at going to rest twice or thrice a week.

Take tincture of snake-root, and the aromatic tincture, of each one ounce—acid elixir of vitriol, one dram and half. Of this mixture take two tea-spoonfuls every day about two hours before dinner, washing it down with a tea-cupful of camomile tea, or a glass of chalybeat water.

If the patient should be low-spirited or hysterical, a dose or two of the *tinctura sacra* or sacred tincture, or of Rufus's pills, may be substituted for the vomit.

If the stomach is offended by bilious humours, twenty or thirty drops of elixir of vitriol may be taken once or twice a day in a glass of water; or if the loss of appetite hath been occasioned by excessive drinking, a dram of the elixir of vitriol may be added to half an ounce of the tincture of the bark, and a tea-spoonful of it taken twice a day as above directed; and in this case the sulphurous waters of the Bath, Harrogate, and other springs of the same quality, are recommended to be taken, wherever circumstances admit, on the spots where they rise.

If acids prevail in the stomach, the diet should be principally confined to light animal food, as vegetables will rather prove injurious, and in these cases the Seltzer or other chalybeat waters will be found useful; and the following medicines may be adapted to circumstances.

Take of the simple bitter infusion, one ounce and half—of the aromatic tincture, one dram. Of this mixture take two or three table-spoonfuls twice or thrice a day, and immediately the following powder and julep.

Take of magnesia, one scruple—of precipi-

tated sulphur, half a scruple—oil of carraways, one drop. Make a powder.

For the julep—

Take of the styptic tincture, two ounces—of water, six ounces. Of this julep take two table-spoonfuls, with or immediately after the powder.

To make the simple bitter infusion—

Take gentian root sliced, and the fresh rind of lemons, of each one ounce and half—of the dry skin of Seville oranges, half an ounce. Pour on these ingredients a pint of boiling water; let it stand till it is cold, and then strain off the infusion for use.

Mustard-seed hath also been taken in the quantity of a tea-spoonful twice a day, and hath produced very happy effects, where the appetite hath been in a manner totally lost; and this remedy is particularly useful to those who are of studious dispositions, or are engaged in sedentary employments: an intense exercise of the mind, and want of bodily motion, are great enemies to the appetite, and except in cases of excess, it is amongst those who are engaged in works of science or the fine arts that this complaint is chiefly to be met with.

The following stomachic wine is also recommended.

Take gentian root, and zedoary root, of each one dram and half, sliced—of the lesser cardamom seeds bruised, half a dram—of dry rind of Seville oranges, half an ounce—of saffron, one scruple. Infuse these ingredients three or four days in a bottle of white wine, then pour it off fine, and take from one ounce to two twice a day.

Indigestion may be brought on by hard drinking, and by any of the other causes which occasion loss of appetite; it may be produced by abstemiousness or excess; the tone of the stomach may be injured by being over distended, and long fasting may induce

induce a bad quality in the juices separated into the stomach, render it feeble, and fill it with wind.

The cure will be effected by nearly the same means as we have prescribed for loss of appetite; and a similar regimen, as to diet, air, and exercise, will be necessary towards the removal of this complaint.

But to the medicines which we have advised for the recovery of the appetite, some others may in this case be added; in particular the Columbo root will be of peculiar service, when a want of digestion is accompanied by a nausea and wind, which is generally the case: it may be either powdered, and taken in substance from ten grains to a scruple, twice or thrice a day, in any grateful aromatic; or an infusion of it in Madeira wine.

Take of the Columbo root in powder, one ounce—of Madeira wine, a bottle. Let it infuse three or four days without heat, and pour it off fine.

Two table-spoonfuls of this infusion may be taken once or twice a day, according to circumstances; but a dose of rhubarb should be given twice a week, or oftener if necessary.

The following pills are also recommended to assist digestion.

Take of asafœtida, two drams—aloes, salt of steel, and ginger powdered, of each one scruple—of the elixir of aloes, enough to make the whole into pills of a moderate size, four of which may be taken night and morning.

Or the following—

Take two drams of the powder of Columbo root—soft extract of the gall of an ox, enough to make it into moderate sized pills; of which two may be taken as above.

Or an infusion of the Columbo root with mustard-seed, in the following proportions.

Take of the Columbo root powdered, one ounce—of white mustard-seeds bruised, half an ounce. Infuse three or four days in a bottle of strong white wine, and then pour off fine.

Of this infusion take a wine-glassful twice a day.

But in all cases of indigestion, the Bath waters are found to be of peculiar efficacy, and when assisted by nervous and strengthening medicines, seldom fail of success.

When *vomiting* is unattended with a diarrhœa, it may be considered as a disease of itself; in which case it is generally accompanied by pains in the soles of the feet, a symptom which distinguishes it from the sickness, nausea, and inclination to discharge the stomach, which are commonly occasioned by inflammation, worms, colic, gravel and stone, poisons, or the like.

This disease is more frequently brought on by drinking to excess, than by any other cause; many who indulge in this vice weaken the tone of the stomach to such a degree, that the powers of digestion are lost, and it refuses to retain the food which is conveyed into it.

The regimen must be suited to the case; the hard drinker must be allowed small quantities of red wine warmed with spices, to which water should by degrees be added till he can bear it diluted to a reasonable proportion; his common drinks should be mint tea, and his food chicken broths, light jellies, and sago, all taken in small quantities at a time.

But if the vomiting is attended by any degree of inflammation or fever, the regimen as to food and diet must be low, and in that case the wine and broths must be omitted.

The following medicines are adapted to the different kinds of this complaint, on which it may be necessary to observe, that such of them as are of cordial compositions, must only be administered where the patient is free from feverish symptoms.

A:sto-

A stomachic draught.

Take of the decoction of Peruvian bark, one ounce—of elixir of vitriol, fifteen drops—tincture of Japan earth, two drams. Make a draught, to be taken twice a day.

A cordial bolus.

Take of powdered nutmeg, dried by the fire, half a scruple—of the cordial confection, one scruple—of balsamic syrup, enough to make a bolus. To be taken at night and repeated in the morning, washing it down with three or four table-spoonfuls of the following julep.

Take of simple peppermint water, six ounces—of spirituous peppermint water, one ounce and half—of salt of hartshorn, two drams—of balsamic syrup, half a dram.

The foregoing prescriptions are more particularly calculated for vomitings which proceed from drinking; those which follow may be useful when this disease is occasioned by bile.

Take of emetic tartar, from half a grain to a grain—of powdered rhubarb, from five grains to eight. Make a powder, to be taken occasionally, washing it down with a teacupful of the decoction of Columbo root.

Take of the vulnerary balsam, two drams—of elixir of vitriol, half a dram. Of this let from fifteen to twenty drops be given two or three times a day on a lump of sugar.

Or, take of simple cinnamon water, one ounce—mithridate, half a scruple. Mix for a draught, to be taken occasionally.

Saline draughts, taken in the act of fermentation, and small doses of the sweet spirit of nitre in simple mint water, may alleviate the complaint.

But when the vomiting proceeds chiefly from a prevailing acid in the stomach, scarce any medicine will afford such immediate and effectual relief as magnesia; but it will be

necessary thoroughly to wash out the stomach with weak mutton, chicken, or veal broth; after which the magnesia, in quantities from a scruple to a dram, may be given as often as a disposition to vomit occurs: when the symptoms are abated, the stomach may be strengthened by the bark, bitters, and chalybeat waters.

Sea-sickness hath been considered as rather salutary than prejudicial, and we apprehend the vomiting occasioned by it is seldom to be appeased by medicine; however, when the patient has no immediate hope of getting on the land, and where this complaint is extremely troublesome, the following mixture may be tried.

Take of fresh lemon-juice, two ounces—of salt of wormwood, one dram—spirituous cinnamon water, and simple cinnamon water, of each one ounce and half—white sugar, three drams. Take three or four spoonfuls occasionally.

Costiveness does not only consist in the infrequency of discharging the excrement, but in the voiding it in so hard a state as that it does not take it's form from the impression of the rectum upon it.

Costiveness is said to be generally owing to spasms or contractions in the intestines themselves; but various causes contribute to a costive habit: it may be occasioned by the bile being in so inactive a state as that it does not descend into the intestines; a prevalent acidity in the first passages; coldness or wet in the feet; drinking great quantities of astringent wines, such as Port or claret; too much or too little exercise, and particularly sitting long in one posture with the body inclining forwards; working with too great an exertion of strength; cold and poor food; and drinking little with meals, and large draughts after them.

A costive habit of body produces headaches, giddiness, a disagreeable taste in the mouth, disrelish of food, indigestion, and loss of appetite; it also occasions a variety of

of disorders in the stomach and bowels, and is in general a sure step towards chronic diseases: but this habit doth not always produce the same effects; some constitutions can bear the want of stools a week, better than others a single day.

In costive cases, the moisture which ought to be discharged with the excrements is absorbed into the juices, and though some part of it may be carried off by a considerable perspiration, yet the grosser part remaining, much earthy matter is lodged in the blood, which produces various disorders, as it happens to be thrown on particular parts.

Persons inclined to costiveness should endeavour rather to correct it by regimen than medicine; from the former lasting benefit may be derived, and the whole habit of body may by degrees be changed; but though relief may be obtained by application to medicine, it is for the most part but temporary, and the frequent use of it too often begets a necessity of repeating it, till at last Nature refuses to perform her functions without the assistance of Art, and the patient becomes a valetudinarian for life.

Those who are of costive habits should avoid hard, dry, salt, and spiced meats; their food should consist of the tenderest animal flesh, and vegetables of a loosening quality, such as asparagus, spinnach, boiled water-creffes, and other sallads, and leeks and onions; fruits of all kinds, whether fresh or dried, dressed or otherwise, may be freely eaten, and the bread should be of that moist kind which constitutes household bread in the country, and which has generally a mixture of rye.

Oily food of all sorts, such as fresh butter, cream, broths, marrow, and olive oil, are peculiarly serviceable; and milk, in the various preparations of milk broth, whey,

butter-milk, and the like, will conduce to the removal of this disagreeable complaint.

The liquors should be also of a softening quality; mild ale, of just such an age as will admit of it's being fine, may be substituted for Port, claret, and spirituous liquors; and the liquids we have just mentioned under the denomination of preparations of milk, may be also taken occasionally, and especially if the patient should be inclined to drink between his meals.

The costiveness peculiar to those engaged in study or sedentary employments, will be relieved by the use of salt of wormwood, or other alkaline salts, and by castor oil; the former from half a scruple to a scruple may be taken occasionally, dissolved in a tea-cupful of whey or gruel; and of the latter from one table-spoonful to two: and where an habitual costiveness is the effect of a melancholy disposition, the alkaline salts may be administered with great propriety, as they do not leave a tendency to the same habit after their operation, which is the case with many other laxative medicines.

Aloes have been much recommended, and small doses of the *tinctura sacra*, or sacred tincture, are said to continue the body longer open after their being administered than most other purges; but we conceive that the milder opening medicines, such as rhubarb, fenna, manna, or even the lenitive electuary or the pulp of tamarinds, taken occasionally in such quantities and as often as the degree of costiveness demands, will answer the purpose better, as they may be repeated at all times when they are required, without the necessity of confinement or the smallest inconvenience.

Rising early, gentle exercise, and the use of baths, hot or cold according to circumstances, will assist considerably in procuring immediate relief, and even in effecting a constitutional change.

Rising early gentle exercise

CHAP.

C H A P. XXXIX.

Of Heartburn, and Pains of the Stomach.

THE *heartburn* is by some described to be a pain and uneasiness about the upper orifice of the stomach; but it is more commonly felt about the pit of the stomach, and extends the whole length of the gullet, which is affected by a pressure or constriction.

Perhaps the lower orifice of the stomach hath been with more propriety considered as the seat of this disorder; for the uneasiness is mostly perceived about that part of the stomach, where the lower orifice is placed; and it may be easily conceived that the other parts of the stomach may be affected by the pains felt in the particular spot last mentioned.

These complaints generally come on by fits, and those are most subject to them whose stomachs abound with acid, and those who are troubled with bilious disorders.

The causes of this disease are various; it may be occasioned by wind, acid, or other acrid humours, in the stomach; by pungent and spicy aliment; by worms; by gouty or rheumatic humours passing to the stomach; by an internal ulcer; by fat food, and especially if cold small liquors are drank soon after it; by bilious matter, which is discoverable as well by nauseous eructations or belchings, as by green and yellowish discharges in vomiting; or by collections of blood about the region of the stomach, in consequence of an overfull habit.

It may also be produced by anxiety; by the passion of anger, particularly when exerted after meals; by sour and stale liquors; by great quantities of tea and other watery fluids which relax the stomach; by poisons of a corrosive nature; and in some instances it accompanies complaints of stones in the gall-duct, or ureters.

Those who are troubled with this complaint, feel an uneasy sensation of pain and anxiety in the stomach; a heat which generally extends up the gullet; faintness, languor, and oppression; an inclination to vomit and reachings, discharging only a cold watery humour; disturbance and inquietude of mind; difficulty of breathing; coldness of the extremities; frequent eructations, which only alleviate the pain for a few moments; head-ach, giddiness, trembling; a weak, intermitting, and unequal pulse, and a pale yellow or livid countenance.

This disorder approaches with a yawning and restlessness; is at the height when the extremities are cold, declines as the heat returns to those parts, and frequently goes off in a copious perspiration.

Unless this disease is attended with considerable inflammation, or is the consequence of some other disorder, it is seldom dangerous; but if it succeeds a fever of the putrid kind, or following a cessation of pain in the gout, denotes a turn of the disorder inwards, it is frequently a fatal symptom; and the like danger may be apprehended if it attends the disappearance of foul ulcers or other eruptions in the skin, or comes on upon the sudden check of a dysentery.

Hence it will appear necessary, in order to effect a cure, to consider whether this disorder is symptomatic or original; if the former, the removal of the disorder which it accompanies or attends must be the first object; and if it is an original complaint, it will be requisite to consult the symptoms, in order to fix on the immediate cause, before it can be determined what remedies are proper to be applied in the case which presents itself.

The

The diet should be light, and consist chiefly of white animal flesh, and that principally roasted, and by no means overdressed; fermented liquors augment the pains, and add to the disorder; water, in which toasted bread hath been infused, or rather boiled a few minutes, and suffered to grow cold, may be drank alone, or mixed with a small quantity of brandy, and a cup of camomile tea taken now and then between the patient's meals will soothe the spasms or contractions of the stomach; and water which hath been distilled, lime-water, or the alkaline mineral waters, may be used as common drinks, as well as the water and toasted bread.

When this complaint is occasioned by acids in the first passages, absorbents are the proper medicines, and of all others magnesia hath been found most efficacious; a tea-spoonful of this powder, taken in a tea-cupful of pure water or simple mint water, and frequently repeated, will scarce ever fail, not only to afford present relief, but to correct the acidities so effectually as to prevent a return of the disorder.

The chalk julep will also be found useful in this case, and is perfectly agreeable to the palate, prepared as follows.

Take of the whitest chalk finely powdered, one ounce—of double refined sugar, fix drams—of gum Arabic, two drams—water, a quart. Mix the ingredients well, and shake the bottle before a dose is poured out. A tea-cupful may be taken three or four times a day.

The following powder has been also prescribed.

Take of prepared oyster-shell powder, two drams—of white sugar, two drams—of oil of cinnamon, two drops. Mix and administer two or three times a day.

If the heartburn proceeds from indigestion as well as acids, the following medicine is advised.

Take of the bitter infusion, one ounce and half—of the aromatic tincture, one dram and half—chalybeat wine, one dram. Make a draught to be taken twice a day, at noon, and about five or six in the afternoon, and persevere in the use of it a week at least.

To make the chalybeat wine.

Take two ounces of the filings of iron—cinnamon and mace, of each two drams—Rhenish wine, a quart. Infuse without heat for a month, then pour or strain off the wine fine for use.

And in cases where this disease is occasioned by indigestion, and is attended with any degree of costiveness, the following powder may be taken morning and evening.

Take of magnesia alba, two scruples—of rhubarb powdered, twelve grains—of the aromatic species, two grains. Mix well together.

The aromatic species is composed as follows.

Take of cinnamon, one ounce—the lesser cardamom seeds without the husks, ginger, and long pepper, of each half an ounce. Mix and reduce them to a fine powder.

When the heartburn proceeds from a hot and acrid bile, agitated by excess of anger, or other violent exertion of the mind, a moderate dose of rhubarb, manna, or fenna, or of rhubarb and magnesia, should be first given; and after the offending matter is by this means evacuated, half a tea-spoonful of the sweet spirit of nitre in a glass of water should be frequently administered, and a draught of cold water may now and then be taken immediately; if the complaint should still continue violent, flannels wrung out of a warm fomentation may be applied to the pit of the stomach, and repeated till a general perspiration is produced; and this treatment will be particularly useful when the heartburn accompanies the *cholera morbus*, or purging and vomiting.

In

In any of the cases where acrid bile occasions this disorder, a gentle emetic may be first given; then opening medicines, and afterwards the sweet spirit of nitre, elixir of vitriol, or Clutton's Febrifuge Spirit, in water or other small liquors, will prove serviceable: if the heartburn has been produced by fat food, let the patient drink a cup of warm water, and take after it a table-spoonful or two of brandy, or other spirits; and if high-seasoned or spicy food is the cause, frequent draughts of warm water will afford speedy relief.

When this disorder hath been brought on by an improper use of spirituous liquors, the infusion, decoction, or tincture of the bark, with the addition of elixir of vitriol, taken before and after meals, with temperate living, moderate exercise, and the mineral alkaline waters, are the best remedies that can be offered; and when it arises from a weak or windy stomach, camomile flowers, or orange peel dried and powdered, and taken in doses from half a dram to a dram once or twice a day, or gentle opiates, will afford relief.

When the stomach is relaxed by a studious life, or sedentary employment, the bark will be necessary, and is most efficacious taken in substance to the amount of half a dram, and from that quantity to a dram, two or three times a day in a glass of water, with a small mixture of brandy; a middle sized spoonful of unbruised mustard seeds taken frequently will be serviceable, and warm bitters, asafoetida, and chalybeats, will in some instances succeed in removing the complaint.

When it is occasioned by worms, strong violent purgatives must be omitted; and the patient should frequently take small quantities of warm milk, or distilled simple waters; and when it is produced by a surfeit, an emetic must be administered and worked off with carduus or camomile tea; if the food which surfeited was putrid, vinegar and other acids may be freely taken.

Where the heartburn has proceeded from poisons, or from purges or vomits operating too violently, the stomach should be washed out with warm water or camomile tea, and then warm milk, oily mixtures, and gentle opiates, will produce good effects; but though strong purges will frequently bring on the disorder, yet in all cases of it the body should be kept moderately open, as well by laxative medicines as by clysters.

Where this disease arises from gouty matter thrown upon the stomach, warm cordials will be necessary to expel it, the strength and quantity of which must be determined by the situation of the patient; they will however require to be repeated till the warmth of the stomach is restored.

Pain of the stomach is so nearly allied to the heartburn, being derived in general from the same causes, and producing similar effects, and the means of cure being for the most part the same, that it will not be necessary to enlarge on this subject, as we have treated so fully of that disease.

But it may be right to remark, that sitting a long time after meals, or immediate application to study when the stomach is full, will frequently produce acute pains in the stomach, unaccompanied with those ascending heats which always attend the heartburn; in these cases, it will be advisable to walk at least an hour after every meal, and to use other exercise early in the morning, such as riding, digging in a garden, or the like.

And this complaint may also, in some instances, arise from a suppression of accustomed evacuations; in which cases bleeding may be required, according to constitution and habit of body; the body must also be kept open by rhubarb, manna, fenna, and other mild laxatives; and if it has in particular attended the stoppage of the periodical discharges of females towards the decline of life, issues, setons, or other drains, will be of great use.

B O O K IV.

Of Chronic and Nervous Diseases.

CHAP. I.

Of the Head-ache.

CHRONIC *diseases* are such as continue long, and are unattended by any considerable degree of fever; as those which proceed rapidly and terminate quickly are called *acute*.

An ill-cured acute disease may sometimes occasion a chronical one; though almost all disorders of slow progress and long continuance have been very justly attributed to indolence, intemperance, or vexation.

When the *head-ache* is an original disease, it unquestionably comes under the description of being chronic; and this is the complaint of which we mean to treat in this chapter: when it occurs as a symptom it will be attended to in speaking of the disorders which it accompanies.

Learned distinctions of the various kinds of this disorder have been made from the different parts of the head which are affected by it: when it is slight, and hath not continued long, it is denominated a *cephalalgia*; when it is violent and of duration, it is called *cephalæa*; when it is felt only on one side of the head, *hemicrania*; in one of the temples, *crotaphos*; and when the pain seems to gather to a point, which is generally about the crown of the head, it takes the name of *clavus kyftericus*.

The nervous membranes of the head are generally the seats of this pain, though the other contents of the skull are also affected by it, as the brain, muscles, and nerves of the head: women are more sub-

ject to this complaint than men, probably on account of wearing great quantities of hair and a heavy head-dress; and children are liable to it from irregularity and impropriety of feeding.

The origin of head-aches hath been ascribed to variety of causes: very ingenious writers have said, that as the motion of the blood in the head is performed through very narrow channels, the redundancy and confinement of this fluid excites pain; for as the blood is naturally hot, when it is impelled by any force it cannot pass quickly through the small vessels, where it meets with many hindrances and obstructions, and that it is for this reason there is a pulsation about the temples.

This disease may be immediately occasioned by the suppression or diminution of accustomed evacuations; by the acrid matter of some diseases fixing on any particular part of the head; by a *caries* or rottenness in the bones of the head; by coagulations or concretions obstructing the passage of the blood through the jugular veins and sinuses of the brain; by stony concretions in the brain; by acrid humours repelled from the external parts of the head; by abscesses in the brain; want of sleep; exposure of the head either to intense heat or cold; by any posture or accidental circumstance which impels a great quantity of blood towards the head; by wet or cold in the extremities; by spasms or contractions of the nervous membranes in the head;

head; by disorders in the stomach, and the faulty quality of the aliment conveyed into it; by abstinence or gluttony; and by hardness or adhesion of the meninges of the brain: strictures of any kind about the neck, or fixing the sight a considerable time on any particular object, and thereby preventing the return of the blood from the heart, will also occasion head-ache.

Some head-aches are attended with a pretty considerable degree of fever; in others no inflammatory symptoms are exhibited: when the suppression of an usual evacuation of blood from the nose occasions these pains, the whole head is generally affected, and becomes hot, red, and swelled; the vessels are distended; the pulsation of the arteries grows strong, especially about the temples; the nostrils are dry and parched; a heat is felt about the entrance of the throat, and is accompanied by urgent thirst.

When a cold and stoppage of the nose is the cause, the pain is in the fore part of the head, of a dull kind, with a sense of pressure, and such a heaviness that the patient can hardly support it; and nearly the same symptoms are observable when it arises from a phlegmatic habit, in which case also the part affected seems cold and benumbed; and when it is produced by a hot and bilious habit, the pain is acute, and attended with a pulsation or throbbing; the head-ache which has venereal taints for its cause, frequently injures the skull itself, and brings on a *caries*, or rottenness in the bones.

When the pain of the head is *hysterical*, it is generally felt in a point on the crown of the head, and seems to the patient as if he could cover it with the top of his finger, though it is so sharp that it is frequently compared to driving a nail into the head; this kind of head-ache sometimes seizes the forehead just over the eye-brows, and sometimes those bones on the upper part of the head, which are called *bregma* or *sinciput*, and at other times it is about the temples;

but whatever part of the head it seizes, and however violent the pain, the extent of it is small, and it rather seems to penetrate deep, than to spread superficially: a sensation of coldness always attends this species of head-ache, which is the *clavus*, or *clavus hystericus*.

If a sudden pain in the head without fever seizes hypochondriac patients, or such as are of a melancholy disposition, depriving them of appetite and sleep, accompanied with a kind of deafness and an internal throbbing in the vessels, madness may be apprehended; and when such a seizure is followed by ringing in the ears, a weakness in the joints, particularly of the knees, and a faltering or interrupted speech, there is danger of an apoplexy.

Violent head-aches, when they are of long continuance, produce melancholy and too often fatal effects, terminating frequently in blindness, deafness, giddiness, apoplexy, palsy, and epilepsy; and it has been remarked, that those who are much subject to the head-ache in their youth, are frequently attacked by gouty complaints as they advance in life.

This disease may in general be prevented, or its violence in a great measure lessened, by attention to a few very simple rules.

Those who are subject to it should at all times eat moderately, and at supper very sparingly; the food should be light, plain, and easy of digestion, and seasoned, spiced, or highly sauced dishes, should be carefully avoided; the liquors should be small or table-beer, of age enough to be fine, but not hard or sour; sound rough cyder, and a glass or two of generous wine now and then, according to habit, constitution, and custom; spirits of all kinds are better avoided, but whenever they are used, should be diluted with boiling water, but not drank till the mixture has stood long enough to reduce the heat to that of milk from the cow.

Those who would avoid the head-ache must

must also sleep with their heads high; no custom can be more pernicious than that of raising the lower parts of the body, and laying the head low; the blood is by this means sent in rapid tides to the brain, from whence it returns with extreme difficulty, the circulation being checked or retarded by the posture; hence violent head-aches, and a great variety of other still more dangerous disorders.

The body must also be kept open to escape from the head-ache, and as obstructed perspiration is frequently the cause of this complaint, the feet should be kept warm, and free from wet or damp.

A cool regimen will be adviseable for those who labour under this disease. The diet may consist principally of vegetables and fruits: of the former such as are emollient and laxative; the latter should be of those kinds that are least apt to occasion flatulencies, and which may be dressed, such as apples roasted, currants in tarts, and the like; the drinks should be diluting, as whey, barley-water, weak infusion of tamarinds, herb teas, and decoctions of the woods.

Where the head-ache is occasioned by acids or other disorders in the stomach, which is the case in periodical pains, and those which are called *hemispheric*, affecting only one side of the head, the cure must begin with gentle emetics of ipecacuanha worked off with moderate draughts of camomile tea; after the stomach is cleansed, mild purges of the electuary of cassia, castor oil, or the *tinctura sacra*, or sacred tincture, should be repeatedly administered: but if these should fail to remove the complaint, more active purges of aloes, or jalap in pills, will be required; but bleeding may be first tried, and this operation is particularly necessary when the disease is owing to an excessive fulness of blood, or to a bilious habit; opening the temporal artery is warmly recommended by some, whilst others are of opinion that bleeding in the

jugular vein affords more certain and speedy relief; cupping and bleeding by leeches at the temples and behind the ears hath also been advised, and perhaps if a proper quantity of blood is taken away, it may not be very material how or from what particular part it is drawn; blisters applied to the neck, behind the ears, and even over the head, have in some cases been of essential use; and issues, setons, or other drains, may prevent the frequent returns of this disorder.

In all cases where the patient cannot conveniently lose blood, placing the feet and legs frequently in baths of warm water will be useful, and the benefit will be still greater, if after the bathing the extremities are rubbed with a flesh brush or cloth till a degree of perspiration is excited; if the pains are extremely violent, and remain unalleviated by any of the foregoing means, warm cataplasms, with horse-radish scraped and mustard-seed, may be applied to the soles of the feet.

If this disorder is occasioned by spasms in the lower parts, bleeding, and rubbing the extremities with volatile spirits, and bathing the legs and feet in warm water, will afford relief.

External applications are in many cases of singular use; æther dropt on a linen cloth, applied to the part, and held close with the hand, sometimes gives immediate ease; and it was in this way, and by an essence differing little from æther, that Dr. Ward cured the head-ache when it was situated superficially.

Volatile salts, or any thing that will irritate the nose, may procure relief when the head-ach proceeds from a cold or stoppage of the nostrils, and in particular when the pain principally affects the fore part of the head: a branch from the fifth pair of nerves spreads on the membrane which lines the nostrils, and another branch of the same on the teguments of the forehead; hence, when the pain is in the eye-balls and forehead,

head, a heat is felt in the nostrils, and benefit may be effected from external means applied to the membranes of the nostrils and the forehead.

The following plaster hath also been recommended to be laid over the head after it hath been shaved.

Take of the common plaster with the gums, one ounce and half—of blistering plaster, two drams—of gum euphorbium, one dram and half. Mix for a plaster.

The most difficult head-aches to remove are those which are periodical; where this complaint is so severely felt as to occasion debility of body and mind, loss of appetite, want of sleep, and the other violent symptoms which we have mentioned in describing the signs of this disorder, our first attempt must be to alleviate the pain by gentle laxatives and opiates, after which the bark will most probably remove it effectually; but if that medicine should fail, valerian in considerable doses may be administered with very good hopes. The roots of valerian powdered may be given in the quantity of two scruples twice a day; but if it should be disagreeable in substance, two tea-spoonfuls of the tincture may be taken morning and afternoon: if, to an ounce of this tincture, a dram of the strong spirit of vitriol is added, a tea-spoonful or two of the mixture taken now and then is an useful remedy in those head-aches which affect the studious, strengthening the stomach, and relieving many windy and spasmodic symptoms; and habitual head-aches have been considerably abated by the use of antimonial wine, taken in such doses as the stomach would bear, with a strong infusion of the root of wild valerian, using at the same time the cold-bath.

When pains in the head arise from acids in the first passages, a glass of warm water with twenty or thirty drops of the spirit of hartshorn, may be taken occasionally, and a dose of magnesia and rhubarb every

second, third, or fourth day, according to circumstances.

In the hysterick head-ach, a blister should be laid on the part, and pills of asafœtida, and decoctions of the valerian root, taken freely. Instead of blisters æther may be applied to the part, and the feet and legs bathed in warm water.

When this disorder is occasioned by a transition of gouty matter to the head, the legs must be blistered, and tinctura sacra must be given to procure stools; after which administer the following draughts.

Take of water, one ounce and half—of the spirituous alexiterial water, two drams—of the cordial confection, half a dram—of salt of hartshorn, from six grains to ten—of Virginian snake-root powdered, ten grains—of syrup of saffron, half a dram. Make a draught, to be taken every sixth hour.

Such pains in the head as are symptomatic, can only be relieved by removing the original disorder; if they arise from venereal taints, mercury is the proper medicine; if from scurvy or any other disorder in which an acrimony is introduced into the juices, the means of relief should be accompanied with a liberal use of the decoction of sarsaparilla.

When the causes of this complaint are a weak stomach and relaxed nerves, joined with anxiety or uneasiness of mind, the Spa waters, gummos pills, and exercise on horseback, seldom fail of giving relief.

If the head-ache, from whatever cause it arises, should be so intense and of such continuance as to occasion that degree of watchfulness which ends in delirium, or the patient's life is in danger, clysters and purges should be first administered, and afterwards opiates both internally and externally; the latter may consist of Bate's anodyne balsam rubbed on the part, and the former may be from ten to twenty drops of liquid laudanum, taken once or twice a day in a tea-cupful of any simple water or valerian tea.

Of

Of Bate's anodyne balsam the composition is as follows.

Take of the saponaceous liniment, three ounces—of liquid laudanum, one ounce. Shake the bottle well before the mixture is used.

And the following is the saponaceous liniment.

Take of the spirit of rosemary, four ounces—of hard Spanish soap, one ounce—camphire, two drams and half. Mix these ingredients well.

But this course of opiates will only be proper in cases of extreme pain, and ought always to be accompanied and followed by proper evacuations.

Prescriptions for the cure of head-aches, of all kinds and in all degrees, are to be met with in every family, and to be learned from every nurse in Great Britain; and though all these prescriptions cannot be infallible, yet there are many of them not to be despised; they may in some instances afford present relief, and whoever has endured severe attacks of these complaints, will readily allow great merit to such remedies as do but even procure a temporary suspension of such acute and excruciating pains.

Apply to each temple the thin yellow rind newly cut off a fresh lemon. Let the patient wet it with his tongue; it will stick, and soon occasion a redness of the part, and sometimes a blister.

Pour into the palm of the hand a little brandy,

and the zest of fresh lemon skin, and hold it to the forehead.

If the head-ache is occasioned by a cold—

Boil a handful of rosemary in a quart of water; pour the whole into a large cup, and covering the head with a napkin, let the steam be received on it as hot as it can be suffered, placing that part of the head which is principally affected so as to take the greatest part of the steam as it arises.

Snuff up the nostrils camphorated spirit of lavender, or the juice of horse-radish.

Grate half a nutmeg, make it into a bolus with brandy, and take it whilst the pain is violent.

For a head-ache of long continuance—

Take a tea-cupful of carduus tea, without sugar, every morning for a fortnight.

For a nervous head-ache—

Take the dried leaves of assarabacca, or wild nard, Syrian mastich, thyme, and dried lavender flowers, of each equal parts; mix and make them into a powder. Of this snuff a small pinch up the nostrils every other night at going to bed, keeping the throat and ears warm.

For the hemicrania—

Shave the affected part of the head, and apply to it a common adhesive plaster, in the middle of which a hole is cut about the size of a shilling; bruise the leaves of ranunculus very much, and place them over the hole in the plaster; this will sometimes raise a blister.

CHAP. II.

Of the Tooth-Ache and Fetid Breath.

THE *tooth-ache* is so universally felt and known, that the symptoms need not be described; it may be occasioned by an impure humour corroding the membranes and nerves, or may follow rheumatic complaints, to which it bears great affinity: it may also arise from obstructions and inflammations of the nerves and vessels of the teeth themselves; from the teeth being exposed to the air; by the gums losing their hold, owing to scurvy or venereal disorders; from hot liquors, which destroy the enamel and admit the air to the bony part; from picking the teeth with pins and other hard instruments, which produce the same effect; from colds in the head, occasioned by obstructed perspiration, and arising from imprudently sitting with the side of the head against doors, windows, or crevices in the wainscot; and all or any of these causes may produce a rotten tooth, which scarce ever ceases to be an aching one, and in this case the sooner it is extracted the better.

But in other cases the extraction of teeth ought not to be undertaken wantonly or hastily; the tooth where the pain is felt may not be diseased: it is not unusual for the real pain to issue from a disorder in another tooth seated perhaps on the contrary side of the same jaw, or even in the opposite; this is frequently the case, nor will it appear extraordinary to those who are acquainted with the sympathy of the nerves in the human constitution.

Or the disorder may be seated in the correspondent gum, or be owing to the inflammatory state of the surrounding vessels; in either of which cases it seldom fails to be considerably aggravated by the distension of the socket of the jaw, and by that

laceration of the gum which necessarily attends drawing the tooth.

Whoever, therefore, under either of these circumstances, is induced to submit to the operation, will find himself rather injured than benefited: in the former case he will have the mortification to reflect, that he has lost an useful tooth, and is still to endure the pain; and in the latter he will have exchanged a tooth which might perhaps have been preserved, for an abscess in the jaw, a fever, or an imposthume.

Yet there are many cases in which the operation of extracting the tooth may not only be judiciously and properly recommended, but may be absolutely necessary to be performed: such as where the tooth hath long been carious or rotten; for then the nerve being exposed to the air, is of consequence always liable to become painful, and the extraction is unavoidable, if the perforation into the rotten cavity is too large to admit of being filled with gold, lead, or wax, so as to answer any good purpose; for when the cavity in the tooth is large, if any foreign body is introduced, the pressure on the nerve is proportioned to the superficial extent of that body, and consequently when that is large it could not be endured.

Yet, notwithstanding it may in such cases be necessary that the tooth should be taken out, yet in many instances relief may be obtained by gentle means without incurring a loss, which not only deprives the sufferer of an ornament, but frequently proves prejudicial to his speech, and subjects him to inconvenience in mastication.

To procure relief without extracting the tooth, the humours must be drawn off from the part affected by gentle laxative medicines,

cines, by bleeding the gums either by scarification or leeches, and by immerfing the lower extremities in baths of warm water; and the fever which ufually accompanies this complaint muft be kept under, by exciting gentle perfpiration with diluting liquors, and by a fuitable regimen as to food.

If the pain and inflammation fhould refift thefe endeavours, blifters may be applied behind the ears, and an emollient gargarifm fhould be frequently held in the mouth as warm as it can be endured; and this will alfo be of ufe if there fhould be a tendency to fuppuration, which may be farther promoted by a roasted fig, held againft the painful part of the gum within the mouth, and poultices of boiled camomile or elder flowers applied to the cheek externally, which muft not be fuffered to remain after they grow cold, but muft be renewed as often as that happens.

The tooth-ache is faid to admit of a cure by introducing a red-hot iron wire into the hollow part and burning the nerve, and afterwards filling the cavity with lead, wax, or gum, or by touching that part of the ear which is called the *antihelix* with a hot-iron; but thefe are operations of which we cannot vouch the fuccefs, and therefore do not recommend them as approved specifics, nor would we advife our readers to truft the performance of them to unfkilful hands.

The fteam of warm liquids, received into the mouth from the fpout of a large teapot, or by holding the head over a veffel filled with hot water, may give eafe, efpecially if the pain is occafioned by a cold.

Relief may in fome cafes be procured from the ufe of opiates, and the following forms have been recommended.

Take camphire and opium, of each ten grains. Of this make eight pills, one of which may be put into the cavity of the decayed tooth, and repeated occasionally.

Or, take of the root of pellitory of Spain bruifed, half an ounce—opium and cam-

phire, of each two drams—rectified fpirits of wine, eight ounces. Digeft in moderate heat for four or five days.

Apply a few drops of this tincture on a doffil of lint to the aching tooth or gums, and repeat it as the violence of the pain may require; or a drop of the oil of cloves, or of peppermint, on lint, may answer the fame purpofe; and where the fever is confiderable, it will be right to omit the opiates, and to fubftitute the remedies laft mentioned, which will alfo be ufeul when this difeafe accompanies pregnancy, of which it is a very common fymptom.

Whatever promotes the difcharge of fputtle, will contribute to the patient's eafe; and various roots are recommended for this purpofe, fuch as gentian, *calamus aromaticus*, or Afatic sweet flag, pellitory of Spain, or the root of the common yellow flower de-luce, a piece of which may be gently rubbed upon the gum, or a bit of it chewed; but on account of it's very acrid quality, fhould be fparingly ufed.

A bit of opium of the fize of a fmall pea, confined by a piece of sticking plafter to the temporal artery, on the fame fide of the head with the aching tooth, is faid to be infallible in procuring prefent eafe.

This complaint is fometimes of the rheumatic kind, occafioning wandering pains in different parts of the head, jaws, and face; in thefe cafes the bark will be ferviceable in the following form.

Take the bark powdered, one dram—of gum guaiacum powdered, half a dram—of the diuretic falt, one fcruple—of balfam of guaiacum, enough to make the whole into twenty-four pills; of which three may be taken night and morning, wafhing them down with three or four fpoonfuls of the camphorated julep, prepared with water.

The camphorated julep may be made as follows.

Take of camphire, one dram—of double refined

finer sugar, half an ounce—of boiling water, a pint. Grind the camphire with a little rectified spirit of wine till it is softened, and then with the sugar till they unite perfectly; add the water by degrees, continuing to stir it in the mortar till the whole is thoroughly mixed; and when the mixture has stood in a vessel closely covered till it is cold, strain it off. This julep may be improved by mixing the camphire with double the quantity of gum Arabic; and in this way vinegar may be added instead of water, which in putrid disorders is preferable.

To make the balsam of guaiacum—

Take of gum guaiacum, four ounces—of balsam of Peru, one dram—rectified spirit of wine, six ounces. Mix well together.

But without attention to the great article of cleanliness about the teeth and gums, medicine will be administered in vain; not that we mean to recommend the use of instruments or dentifrices; both are equally pernicious: scaling the teeth frequently destroys the enamel, and lays the bone bare at once, and the corrosive quality of the dentifrice produces the same effects by slow but sure degrees. If the mouth and teeth were carefully washed after every meal with water, cold in the summer, and a little warm in the winter; and if once every day the teeth and gums were well cleaned with a soft brush, dipped in water only; tinctures, dentifrices, and scaling instruments, would be unnecessary, nor would the complaint of aching teeth be so frequent. It is somewhat astonishing, to find persons who practise every act of cleanliness, and even delicacy, in every other part of their persons, so totally inattentive to the care of their mouths and teeth, as to forfeit by their neglect the blessings of ease, and lose one of the greatest ornaments of the face!

Nor does the evil consist only in a disagreeable appearance, or inconveniencies suffered by the parties themselves; those

who permit their teeth and gums to become foul, commit an offence against decency.

For a *fætid breath* is much oftener the consequence of rotten teeth and diseased gums than of any internal disorder, and those who have occasion to mingle a great deal with the world, should have peculiar regard to this circumstance, as the most beautiful face will be deformed by exhibiting foul or bad teeth, and wit itself will lose its effect, when the utterance of it is accompanied by putrid exhalations.

A *fætid breath* may in some cases proceed from a foul stomach or diseased lungs; in both these cases the cause must be removed by application to such remedies as are adapted to the particular disorders by which it is occasioned: when it has been produced by mercurials, it will hardly ever be got the better of till regimen and alteratives have affected a total change in the habit of body.

This disagreeable complaint may in some instances be constitutional, and in these cases will very rarely admit of remedy; but though it cannot be wholly cured, it may be alleviated by strict attention to cleanliness, by avoiding such food as is apt to turn sour and rancid in the stomach, and by refraining wholly from the use of spirituous liquors, the smallest quantity of which will contribute to render intolerable a breath naturally offensive.

A paste or lozenges of the following composition, kept frequently in the mouth, will assist in correcting a *fætid breath*, or at least prevent it from being highly injurious to others.

Take angelica root and orris root, of each half a dram—coriander seed, and the seeds of the lesser cardamom, of each a dram. Reduce the whole to a powder, and make it into a paste with rose water in which a small quantity of gum Arabic hath been dissolved; this paste may be cut into any form, and dried as lozenges.

C H A P. III.

Of Hoarseness and Loss of Voice.

A *Hoarseness* is a diminution of the sounds of the voice, attended with an unusual asperity or roughness; and the upper parts of the windpipe are those which are principally affected.

It may be occasioned by a defluxion of acrid and viscid humours, and a copious effusion of thin matter upon the upper parts of the windpipe; from a tumor or inflammation in or about the same part; from a dryness of the muscles subservient to the purposes of speech; or from the spittle becoming thick and glewy, and rendering the surface of the throat rough and unequal: and this complaint sometimes arises from pustules of small-pox about the entrance of the windpipe.

In the first case half a tea-spoonful of the juice of horse-radish may be mixed with half a pint of whey sweetened with honey, and taken every morning; and when the defluxion is particularly sharp, small quantities of the powder of gum tragacanth and starch, or of Japan earth, may also be taken in new whey.

When a hoarseness proceeds from tumor or inflammation, the following gargarism will be found useful.

Take of the decoction of the leaves or root of marsh mallows, six ounces—of the volatile spirit of sal ammoniac, thirty drops. Mix for a gargle, and shake the bottle before it is used.

When the hoarseness arises from a dryness of the muscles, the sweet spirit of nitre or other acid attenuants, with diluting liquors, will generally relieve; and such lubricating drinks as tend to facilitate the passage of the variolous matter through the skin, will be of use when this complaint

occurs in the small-pox: and diluting liquors will be equally serviceable where it is produced by the thickness and viscosity of the spittle.

The *loss of voice* is occasioned principally by the diminution or total obstruction of the nervous fluid through the nerves destined for the motion of the tongue: hence a palsy of the tongue, which precedes or is the consequence of a hemiplexy or paralytic stroke, affecting one side of the body; or of an apoplexy, which is a total privation of sense or motion; requires the utmost attention.

When a loss of voice appears alone, it bespeaks the approach of one of those disorders; if it succeeds either of them, and is accompanied with a defect of memory, and the powers of the mind seem impaired, a return may be apprehended: it is always a troublesome and obstinate disease, though somewhat less so when the branches of the fifth pair of nerves which run to the tongue are only compressed by a stagnation of ferrous humours.

This disorder may likewise arise from eruptions on the skin being suddenly repelled; by collections of blood under the tongue, or in the entrance of the gullet; by the obstruction of periodical evacuations in full habits; by spasms; by worms; by a crumb of bread, or other hard substance, falling into the upper part of the windpipe; by a sudden operation of fear; or by an improper use of spirituous liquors.

To effect a cure, our endeavours must be directed to remove whatever obstructs the flow of the nervous fluid into the tongue, and then to strengthen the weakened parts.

When this disorder proceeds from eruptions of the skin being repelled, the patient's

tient's drinks should be warm; and such medicines are to be given as promote perspiration, and small quantities of spirit of hartshorn with amber, or the antimonial wine, may be mixed with the vulnerary balsam, or balsam of Peru, and given to the amount of fifteen or twenty drops on a lump of sugar, or in the common drink.

If it arises from collections of blood, bleeding and nitre, with other antispasmodics, will be necessary; and medicines of the latter kind may also afford immediate relief, if the disease is occasioned by worms; but in that case no cure can be expected till the worms are destroyed.

If spasms or contractions about the tongue or entrance of the throat are the causes of this disorder, external anodynes may be useful; and for this purpose Bate's anodyne balsam may be gently rubbed over the part, or it may be bathed with flannels wrung out of the following fomentation.

Take of the heads of poppies bruised, two ounces—elder and camomile flowers, of each an ounce. Boil these ingredients in a quart of water twenty minutes, then strain it, and add of distilled vinegar, six ounces—of spirit of sal ammoniac, one ounce. Mix, and warm it for use.

Bate's anodyne balsam is made as follows.

Take of the saponaceous liniment, six ounces—of liquid laudanum, two ounces. Shake them together.

To make the saponaceous liniment—

Take of the spirit of rosemary, half a pint—of hard Spanish soap, one ounce and half—of camphire, half an ounce. Let the

soap dissolve in the spirit, and then add the camphire. This is also called opodeldoc.

When this disease proceeds from a palsy of the tongue, bleeding and gentle purges will be necessary according to the habit of body, the anodyne balsam may be applied externally, and warm nervous medicines may be administered internally; for this purpose the following forms are offered.

Take of castor, one scruple—of saffron, six grains—of the aromatic species, three grains—of confection of kermes, commonly called alkermes, enough to make a bolus. To be taken every fourth or sixth hour, swallowing after it three or four spoonfuls of musk, or camphorated julep.

The following saline draught may also be useful.

Take of pure water, one ounce—of fresh lemon-juice, half an ounce—salt of wormwood, and the cordial confection, of each one scruple—balsamic syrup, one dram. Make a draught, to be taken every six hours.

In this case also, bathing the feet in warm water, and the frequent injection of carminative clysters, will be serviceable. For the clyster—

Take of camomile flowers, and elder flowers, of each half an ounce—of aniseeds, half an ounce. Boil in a pint and half of water till it is reduced to a pint.

That deprivation of voice, or rather speech, which succeeds the shock of a partial palsy or an apoplexy, seldom admits of relief, except from blisters applied to the nape of the neck.

CHAP. IV.

Of the Jaundice.

THE *jaundice* is a vitiated state of the blood, from the bile returning or being absorbed into it, injuring the functions of the body, and rendering the skin yellow, and in some instances almost black.

The causes of this disease may be a schirrhous or inflamed liver; gall-stones obstructing the passage of the bile into that intestinal part which is called the *duodenum*; the mixture of the bile with the blood; and by whatever causes the gall-stones to enter the biliary passage, such as violent passions, strong purges or emetics, and the like.

This disease is also said to be occasioned by colds, by the stoppage of usual evacuations or drains, and by the want of purging off the *meconium* in infants; and is also described as a symptom attending several sorts of fevers, and to take place in some instances after agues have been prematurely and injudiciously stopped by astringent medicines: but whether the yellowness of the skin in those cases, or that which appears in consequence of the bites of vipers, and other poisonous animals, is a decisive symptom of the jaundice, admits of some doubt.

The symptoms of the jaundice are inactivity, anxiety, weariness, sickness, vomiting, wind, oppression at the breast, and difficulty of breathing; uneasiness at the pit of the stomach; and an itching or pricking, like that which succeeds a sleeping or benumbed limb, is felt all over the body.

At the same time the whole skin and the whites of the eyes turn yellow, the urine assumes the same colour, and deposits a copious dark sediment; the stools, which are few, are white or greyish; and the patient complains of a bitter taste in the mouth, and all objects have a yellow cast.

As the colour of the skin grows darker, and approaches nearer to black, this disease becomes dangerous; it is seldom so whilst the yellow colour remains, except in cases of schirrous livers, or when persons advanced in years have had a long continuance or frequent returns of it, or unless it is complicated with other disorders, when it sometimes proves fatal.

The food should be cooling, softening, and opening; vegetables, fruits, and broths, are most adviseable; and the drinks should also possess the same qualities, and consist of infusions and decoctions of emollient herbs and whey, or other preparations of milk: during the whole disorder the patient should use as much exercise as he can endure without much fatigue, and the warm bath, chearful company, and innocent amusements, will very considerably contribute to his recovery.

If feverish symptoms in the beginning of this disorder afford reason to apprehend an inflammation of the liver, and especially if the patient's habit of body is full and sanguine, bleeding will be necessary; and the quantity of blood to be taken away, as well as the repetition, must depend on the age and strength of the patient, and other circumstances. After this operation, emetics will be of singular use, and those of the antimonial kind are to be preferred where there is no immediate appearance of inflammation; for this purpose a grain or two of the emetic tartar will be sufficient, though some advise half a dram of the powder of ipecacuanha, worked off with a few draughts of camomile tea.

After the emetic, the following purges may be administered according to the symptoms.

Take

Take of the infusion of fenna, two ounces—of tincture of fenna, and vinous tincture of rhubarb, of each three drams. Mix for a draught.

Or, take of alkaline aloetic wine, three drams—of pennyroyal water, two ounces—spirituous tincture of rhubarb, one dram. Make a draught, to be taken at going to rest.

To make the alkaline aloetic wine—

Take of salt of tartar, six ounces—of succotrine aloes, English saffron, and myrrh, of each half an ounce—of crude sal ammoniac, three drams—of mountain wine, a pint. Let these ingredients infuse about a week without heat, shaking the bottle frequently, and then pour off the clear liquor for use. The myrrh and saffron should be added to the wine two or three days before the other ingredients.

But if this disorder is occasioned by a mere redundancy of bile, which may be known by the high colour and strong and acrid smell of the stools, the gentler laxative medicines, such as manna, the pulp of tamarinds, or castor oil, will be proper; and in this case acids and demulcents will assist.

Castile soap hath been also recommended in this disease, either alone, in quantities sufficient to open the body, or in the following pills.

Take of the best Castile soap, two drams—of powdered squills, one scruple and half—magnesia and rhubarb in powder, of each half a dram—of syrup of marsh mallows, enough to make these ingredients into forty pills, three of which may be taken twice or thrice a day, drinking after each dose from one ounce to two of the following vinous tincture.

Take turmeric root powdered, and tincture of madder, of each one ounce—of fresh millepedes or wood-lice bruised, half an ounce—of the *canella alba*, or of Winter's bark, two

drams. Digest the whole twenty-four hours in three pints of Rhenish wine, and then pour or strain it off fine.

But it is the opinion of some, that all the advantages of soap, without it's disagreeable taste, may be obtained from the diuretic salt; which is still more useful when any feverish heat attends, allaying those accidental symptoms, whilst it carries on the main object, the cure of the disorder.

This medicine may either be given to the quantity of a dram, or a dram and a half, according to age and other circumstances, twice or three times a day, in a tea-cupful of any of the patient's common drinks, or used instead of the salt of wormwood in a saline draught.

Take of pure water, one ounce and half—of fresh lemon-juice, half an ounce—of the diuretic salt, one dram—of spirituous alexiterial water, two drams—of syrup of marsh mallows, one dram. Make a draught, to be taken every six or eight hours, according to the nature and violence of the disease.

If an hæmorrhage should accompany this disorder, it shews that the blood is in an acrid or dissolved state, and therefore aloes and other attenuants should be avoided, and acids and demulcents substituted; castor oil administered in the form of an emulsion, and decoction of hemp-seed boiled in milk, will be useful. To make the decoction of hemp-seed—

Boil two ounces of the seed ten minutes in a quart of new milk, then pour or strain off the milk, and sweeten it with honey to the patient's taste. A tea-cupful of this decoction may be taken twice a day.

This decoction will also be proper when the jaundice is attended with any considerable degree of fever.

If the itching or pricking in the skin should be so troublesome as to deprive the patient of his rest, a few drops of liquid laudanum

laudanum may be added to such of his medicines or common drinks as are taken last before going to bed.

The waters of Bath and Harrowgate are esteemed specifics in this disease; and they are certainly more efficacious when they are drank on the spots where they rise, than when they have been bottled and carried to a distance; but if the patient cannot conveniently drink the waters at the fountain-head, those of Harrowgate are to be preferred.

Of the various common prescriptions for the cure of this disease, the following are offered, though perhaps others of equal merit may have been omitted; indeed the catalogue is so large, that not one in ten can be selected.

Eat as many raw eggs as the stomach will bear without sickness, for several days.

Wrap the feet in the leaves of celandine.

Boil three ounces of burdock root in two quarts of water, till it is reduced to three pints. Drink a tea-cupful of this decoction every morning.

Beat the white of an egg till it becomes thin, and take it in a glass of water morning and evening.

Boil two ounces of the second or yellow bark of the barberry tree in two quarts of water, till it is reduced to three pints. Of this decoction take a wine-glassful twice a day; it may be rendered palatable by acids and sugar.

CHAP. V.

Of the Asthma.

THE *asthma* is a disease which takes its name from principally affecting the breath, and is of two kinds; the *pituitous*, *humoural*, or *moist asthma*; and the *spasmodic*, *convulsive*, or *dry asthma*.

Persons of full and sanguine habits of body, and who are strait or narrow chested, are most subject to this disorder, which attacks persons of all ages, but commonly those who have passed the prime of life.

The causes of this disorder may be such a conformation of body as we have just mentioned; defects in the lungs, or parts subservient to the purposes of respiration; a preternatural size of the lungs; tumors, and particularly those of the windy kind, on these organs; a redundancy of blood; or a defect of the vital fire in the lungs.

It may also be occasioned by a diminished perspiration, or a sudden check to that evacuation; by mineral or metallic fumes

received into the lungs; by acrid defluxions; by cold north winds affecting the diaphragm with a spasmodic stricture; by the imprudent repulsion of the morbid matter of eruptive disorders; by gout being checked in the extreme parts, and the matter falling upon the lungs; by the stoppage or obstruction of accustomed evacuations or drains, such as old ulcers, issues, or setons; by violent exercise, or extraordinary emotions of the mind; or by whatever prevents the free circulation of the blood through the lungs, or obstructs their due expansion.

In the approach of this disorder the patient is seized with an oppression of the breast, a disinclination to any kind of exercise or motion, and a weariness after the smallest exertion: his breathing is short and laborious; he is seized with a cough and hoarseness; is troubled with wind in the stomach; and plagued with uneasy, hot, and

four eructations; he loses his sleep and grows restless in his bed, though he does not complain of any considerable degree of heat; and his nostrils are contracted so as not to admit of easy respiration.

As the disorder gains ground, the cheeks grow red; the eyes prominent, like those of persons under strangulation; the patient snores even when awake, though much more loudly whilst he sleeps; his voice is languid, tremulous, and indistinct; he seeks a free and cold air, and shuns the house, as too narrow and confined a spot for breathing; he holds his head erect when he respire, gasps at the air with open mouth, and seems eager to draw in a larger quantity than he is capable of receiving; though his cheeks are flushed, the other parts of his face are pale; sweats break out upon his forehead and neck; he is tormented with a sharp and unceasing cough, and expectorates only a very small quantity of thin, cold, and frothy matter; in breathing, his neck swells, and his breast and stomach seem drawn in and contracted; the pulse is small, quick, and low; the legs become slender and emaciated; and costiveness is a general attendant: if these symptoms increase with violence, the patient struggles miserably a short time, and then dies in a suffocation.

Other symptoms, though more rarely, attend this disease: in some instances the patient is afflicted with tumors or swellings in the face, hands, feet, or back; a torpor or numbness seizes his arms; lead-coloured spots are perceived on his face; and a slight irregular fever approaches in the morning, and increases towards night. These symptoms lead to some kind of dropsy, or sometimes terminate in a partial or universal palsy.

In the *dry asthma* the patient is somewhat at ease in the intervals between the fits of coughing, but in the pituitous or moist kind, he is seldom free from some or other of the symptoms, though they are at some

times less aggravated than at others; they are particularly augmented by easterly winds, which occasion an increased expectoration of phlegm.

The favourable signs are, when the cough becomes less constant, or returns at longer intervals; when a moist spittle is freely thrown off; when the stools are copious and watery, and large quantities of urine are discharged: as the cure becomes more probable, the tone of the voice will be restored; nature will be supported by comfortable sleep; the patient's breast will be relaxed and become easy; the pains will remit and shift to the shoulder-blades; and he will breathe more freely and at longer intervals, though still with a degree of roughness. As the disorder abates, the urine becomes higher coloured, and drops a very considerable sediment.

When this disorder has not been of long continuance, and when it has been produced by the falling in of gouty or eruptive matter, hopes may be entertained of perfect recovery; and an evacuation of blood from the hæmorrhoidal vessels, or a return of female periodical discharges, during a fit of asthma, alleviate the complaints considerably: but in convulsive asthmas, the patient's life is in extreme danger at every return, and where the fits are frequent and of long continuance, if the patient escapes with life from the asthma, he generally falls into a dropsy, and meets destruction from that disease; if a slow fever comes on with an unequal or intermitting pulse, a palsy in the arms, palpitation of the heart, a suppression or very small discharge of urine, and faintings, death is at hand.

Though this disease attacks all ages and constitutions, yet in different ages and habits it has very different effects; the young and the vigorous frequently get through it; but when it seizes on such as are advanced in years, it generally accompanies them through life.

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In this disease great regard is due to regimen; the patient's food should consist of broths, such vegetables as are of a softening emollient quality, and the youngest animal food, fruits, pyes, and puddings; the suppers should be of spoon-meats only, though the omission of them wholly will be of advantage; the patient's drinks may be Seltzer water, with a mixture of Rhenish wine, mustard whey, or infusions of ground-ivy, daisy flowers, hyssop, or Paul's betony sweetened with liquorice.

Exercise will contribute greatly to the patient's relief, and assist the impeded action of the lungs; but it should be taken regularly and cautiously, on horseback or in an open carriage, if the patient's strength or the weather will permit, but he should by no means be exposed to a moist, damp, or very sharp air.

The patient's cloathing should at all times be rather warmer than usual; he should wear woollen stockings, and such shoes as will effectually secure his feet from wet or even damp; and a flannel shirt next his skin will promote perspiration, and consequently tend to his ease and recovery.

The most important of all objects in our endeavours to relieve an asthmatic patient, is to place him in that air wherein he appears to breathe with the greatest degree of freedom; for, according to certain constitutional circumstances, some are easy only in the dry and serene air of an elevated situation in the country, and others derive benefit from the moist and vapid atmosphere of great towns: the latter case, however, is much less common than the former, and perhaps if the patient is removed from the smoak, the air may be softened by the contiguity of a town, and rendered more fit in most cases for weak or disordered lungs.

But if the air of the town disagrees, attempts to remain in it will generally be fatal; and if the patient's engagements are of such a nature that he cannot relinquish it entirely, he should at least contrive to

sleep in the country, the night air of towns being from a variety of circumstances more noxious than that of the day, and the breathing of the asthmatic patient during his sleep being much more liable to be affected than when he is awake: instances have not unfrequently occurred, where persons who have appeared to be in the last stages of asthmas, have not only received relief, but perfect recovery, from the air of a warmer and more equal climate on the continent.

If the fit is violent, and the habit of body full and sanguine, bleeding will be of use; but care must be taken not to weaken the patient by drawing off large quantities, or repeating it too often.

In order to procure immediate relief, the body should be opened with Glauber's salts, worked off with considerable draughts of thin gruel; but if the patient is particularly costive, which is generally the case, a purging clyster with asafœtida will be proper, which may be given in the following form.

Take of milk and water in equal quantities, ten ounces—of Glauber's salts, one ounce—sweet oil, and brown sugar, of each one ounce and half—of asafœtida, three drams.

This clyster should be administered moderately warm, and may be repeated as occasion shall require; and perspiration should in all cases be excited by drinking plentifully of diluting liquors, and carefully avoiding whatever may check an evacuation, the obstruction of which is the most common cause of the disorder, and on the restoration of which in many instances depends the cure.

In the *moist asthma* the aid of expectorants is very important, and the following mixture is recommended.

Take asafœtida and gum ammoniac, of each one dram and half. Dissolve in nine ounces of pure water, and let the patient take a large spoonful frequently.

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To this mixture may be added, according to circumstances, a small quantity of the paregoric elixir, oxymel of squills, or syrup of garlic, which latter is celebrated as a specific in asthmatic cases.

Whenever the oppression of the breast is considerable, the patient may receive relief by frequently bathing his feet and legs in warm water, and even by fomenting the part affected, or applying bladders of any warm liquid: in emergent cases, warm poultices to the soles of the feet may produce happy effects; rubbing the feet and legs to excite perspiration may be also useful.

Vomits have been thought advisable, but not in the early stages of this disease; when the expectoration becomes tolerably free, they may in general be given with safety and advantage; for this purpose the oxymel of squills, or the emetic tartar, have been usually prescribed, though some are of opinion that ipecacuanha is to be preferred, and direct it to be taken in quantities from three to five grains every other morning, or less often, according to the state of the disorder, and to be continued for some weeks, as it may prove equally beneficial whether it excites vomiting or only a nausea: if the humoural asthma is attended with spasms, ipecacuanha may be used in this way with great hope of success.

Blisters on the back, to be kept open, and other drains, such as issues and setons, are frequently found to contribute to the patient's ease, and in particular when the asthma is occasioned by the repulsion of eruptions; in which case also such medicines as promote perspiration will be absolutely necessary, and the following is advisable.

Take of the compound powder of contrayerva, ten grains—of nitre, four grains—of camphire, two grains. Make a powder, to be taken every sixth or eighth hour.

These powders may be washed down with a tea-cupful of the tea of elder flowers, to

which a small quantity of Clutton's Febrifuge Spirit may be added.

The following forms of medicines for this disease, may be used according to circumstances.

A pectoral draught.

Take of the milk of gum ammoniac, one ounce and half—of spermaceti, dissolved with yolk of egg, one scruple—of salt of hartshorn, half a scruple—of nutmeg water, two drams—of balsamic syrup, one dram. Make a draught, to be repeated occasionally.

A pectoral bolus.

Take of the root of elecampane powdered, one scruple—of compound powder of myrrh, ten grains—of nutmeg dried by the fire and powdered, six grains—of oil of mint, one drop—of balsamic syrup, enough to make a bolus. To be taken in the morning, washing it down with the following draught.

Take of water, one ounce and half—of nutmeg water, three drams—of salt of hartshorn, one scruple—of balsamic syrup, one dram.

In the nervous asthma, bleeding should be admitted with caution; in cases of this sort opiates and the bark may be serviceable, and the following prescriptions may be applied as occasion may require.

Take of the foetid volatile spirit, half an ounce—of the paregoric elixir, two drams. Mix, and take from twenty to forty drops occasionally in any common diluting drink.

Take of the milk of gum ammoniac, one ounce and half—of salt of hartshorn, half a scruple—of the paregoric elixir, twenty drops—of asafoetida, one scruple. Make a draught, to be taken as it may be necessary.

In the dry or nervous asthma, the warm bath, and the steams of warm water or of decoctions of the emollient herbs received

ceived into the lungs from the mouth, will assist the cure; and the bark, either in substance, decoction, or tincture, with small quantities of opium, may be expected to compleat it.

The following medicines may be added to the prescriptions already given, as they are said to have been applied with great success in this disease.

Take the pulp of fresh squills, and gum ammoniac, of each half a dram—of the flowers of gum Benjamin, one scruple—of balsam of sulphur with aniseeds, enough to make the whole into twenty-four pills; of which three may be taken morning and night, and the use of them continued according to circumstances.

Take of tincture of madder, one ounce—of mace, two drams. Boil in a quart of water, and add to the decoction, when strained, of the aromatic tincture, two drams—of syrup of lemon-juice, two ounces. Of this a tea-cupful may be taken three or four times a day.

In order to prevent returns of this disease, the patient should be particularly attentive to warmth in his feet; and if he is at all advanced in years, can only hope to prolong his life by keeping some drain constantly open.

Simple remedies for the relief of this disorder are numerous; among them the following are said to have been successful.

Eat boiled carrots as the principal food for a fortnight.

Make a syrup of the juice of garlic, and take a tea-spoonful when the difficulty of breathing is troublesome.

Drink very strong coffee, receiving the steam of every dish into the lungs before it is swallowed.

Cut an ounce of liquorice root into slices, infuse it twenty-four hours in a quart of water, and take a tea-cupful of the infusion now and then, or use it as a common drink.

CHAP. VI.

Of Dropsies.

THERE are many kinds of dropsies, distinguished by different appellations; but, as a general description comprehending all the species, they may be denominated disorders arising from swellings of the body, or of the particular parts affected, occasioned by collections of water or thin humours.

Of these disorders, the *anasarca* is a collection of water immediately under the skin, spreading between the skin and the flesh, and is seated in what is called the *cellular membrane*.

The *ascites* is that species of dropsy

wherein the water is accumulated in the cavity of the belly, or in the dilated cavities of the glands or other vessels; and of these two kinds of dropsy we mean first to treat.

The causes of these diseases are various; they are sometimes the effect of other disorders; as the jaundice or asthma; intestinal obstructions, such as schirrous liver, consumption of the lungs, or defects in the kidneys; they may also be occasioned by excess of eating; immoderate drinking, particularly of spirituous liquors; by poor food and watery drink; and by whatever obstructs or checks perspiration, or occa-

sions the blood to throw off an extraordinary quantity of fluids.

Dropsies may also be produced from an hereditary disposition of the body, from want of exercise, from the suppression or too great excess of evacuations, and from the effects of violent or too often repeated medicines.

The signs of the *anasarca*, or *dropsy under the skin*, are, that the part is distended, and appears considerably larger than in it's natural state; the colour of the skin is more pale, and the impression of a finger remains some time after it has been laid on the part with any degree of weight or violence; the eye-lids after sleep seem full and stiff, and the whole face enlarged, which appearances wear off after the patient has been some time awake; and his feet and ankles begin to swell towards night: if the disorder is in the belly, it seizes the lower part, and gradually ascends; and when it reaches the height of the navel, that part appears to sink in; the urine and all the other evacuations are lessened in quantity; the breathing becomes difficult; and the patient complains of heaviness, weariness, and perpetual thirst.

The symptoms of the *ascites*, or *dropsy in the belly*, are in most cases the foregoing, with the addition of several others: the insides of the hands are hard and dry; the little urine discharged is disturbed and high-coloured, and drops a great quantity of brick-coloured sediment; a slow fever and troublesome cough attend; the appetite fails; the arms and face are emaciated, and the legs swell; and, except the quantity of water hath rendered the integuments too tight, the water may be perceived to fluctuate, by gently striking the belly on one side, and applying the other hand to the opposite.

In the worst state of this disease blisters arise on the feet, containing an acrid corrosive humour, which inflames and ulcerates them; and this denotes an inflam-

mation of the bowels, and consequent death.

All ages, constitutions, and sexes, are subject to these diseases, though they more commonly attack such as are advanced in years; those who are debilitated by excesses, or worn down by other diseases; and women after repeated child-bearings.

The diet should consist of dry and solid food, but not such as is difficult to digest, or hardened with salt; the animal food should be principally roasted, and such flesh as is of a dark complexion, rather than white meats; beef and mutton are to be preferred to veal and pork; and ducks, geese, and wild fowl, to chickens, turkeys, or the like.

Of vegetables, cresses of all kinds, the whole onion tribe, and horse-radish, may be freely eaten; and warm pungent pickles, such as the seeds of the nasturtium, radish pods, and such other aromatics as are of English growth.

Preserved fruit, and in particular raisins, will be of singular use; the latter with biscuits should constitute the patient's supper.

Though some instances have occurred where patients, under the influence of ungovernable thirst, have actually obtained cures by drinking, contrary to all advice, large quantities of beer, cyder, or other even smaller liquors, yet it has been held, that relief is rather to be expected by abstinence as much as possible from fluids; that the thirst may be allayed by acids of fruit, or by dipping bread in wine, but draughts of any liquid are in general prejudicial; and that where they are unavoidable, they should be composed of a mixture in equal quantities of Spa water, and that sort of Rhenish wine, which on account of it's age is called old hock: of all liquors, sound and generous white wines are to be recommended; though, according to the above opinions, the less in quantity taken of those the better, unless medicated in such a way as will be prescribed hereafter.

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In all chronic diseases, and in none more than that of which we now treat, exercise is important; but it should be used in such a degree only, as to excite gentle perspiration, not profuse sweats; and it should be constant, and, as much as possible, in the open air, and upon the tops of hills and mountains: there is no disorder in which a moist or humid air is more noxious; it therefore behoves the patient to reside, during the cure, in an elevated situation, where he may breathe a dry, pure, and light air.

When the weather will not permit the patient to be abroad, he should betake himself to some such mechanic amusement as may prevent his sitting still: studious employments are very unfit for such as are afflicted with these disorders; those who are of necessity engaged in them, should make frequent use of the flesh-brush, and dry flannels, over the whole body, but in particular about such parts as are apparently affected.

To promote evacuations of all kinds must be our first attention; and for this purpose vomits, purges, perspiratives, and diuretics, must succeed each other; but the strength of these medicines, and the violence of operation, must be proportioned to age, strength, constitution, and habit of body.

The vomits may be either of emetic tartar, from two grains to five, or of ipecacuanha, to the quantity of a scruple; but emetics ought always to be administered with caution; and if the patient should be of a weak, relaxed, or reduced habit, they should be either wholly omitted, or given less frequently, and of a less violent composition.

The following forms are also recommended.

Take of ipecacuanha in powder, one scruple—of the oxymel of squills, from half an ounce to an ounce—of simple cinnamon water, half an ounce. Make a draught.

Or, take of the yellow mercurial emetic, from three grains to five—of ipecacuanha root powdered, half a scruple—of simple syrup, enough to make a bolus.

The latter of these prescriptions is calculated for persons of robust habits and strong constitutions, and will require to be worked off with rather a larger quantity of liquid than the milder emetics, after which two or three draughts of warm water or camomile tea will be sufficient.

After the operation of the vomit, which must be repeated according to circumstances, purges of the following compositions must be suited to the patient's age and strength.

Take of syrup of buckthorn, one ounce—of jalap powdered, one scruple—of ginger powdered, half a scruple—of salt of tartar, half a scruple—of simple peppermint water, one dram. Make a draught, to be taken early in the morning.

Or, take of scammony powdered, one scruple—of gum guaiacum powdered, half a scruple. Mix for a purging powder, to be taken as above.

Or, take of jalap powdered, one scruple—of calomel, from five to eight grains—of the aromatic species, six grains—of simple syrup, enough to make a bolus. To be taken at going to rest.

The last-mentioned bolus must not be repeated so often as to occasion salivation, and a strong decoction of garlic, taken to the amount of six or eight ounces, in different doses of an ounce or two at a time, on the day succeeding the administration of the calomel, will considerably assist the operation of that medicine.

The following purges may also be given where the patient's habit of body will admit of an operation somewhat violent.

Take of elaterium, (which is a preparation from the wild cucumber) from half a grain to

to two grains—of oil of juniper, four drops—of sugar, half a scruple—of simple syrup, enough to make a bolus.

Or, take of the powder of jalap, one scruple—of gamboge and ginger in powder, of each half a scruple—of simple syrup, two drams—of mint water, an ounce. Make a draught.

Or, take of jalap in powder, one scruple—cream of tartar, two drams—calomel, from four grains to seven—simple syrup, or syrup of roses, enough to make a bolus.

Those purges which have the calomel in their composition, should not be worked off with any considerable quantities of gruel or other liquids; if they should occasion such griping pains as to require being immediately moved, light broths of chicken or veal are proper for that purpose.

When the operation of either of these purges is over, some such draught as the following will be necessary, as a neglect of it may probably occasion the belly to be again distended.

Take of syrup of poppies, from half an ounce to one ounce—peppermint water, and Mindinerus's spirit, of each half an ounce—of the stomachic tincture, two drams—of salt of amber, six grains. Make a draught.

After the purges, such medicines should take place as tend to promote perspiration, and of those the following are advised.

Take of camphire, four grains—of liquid laudanum, one grain—of syrup of saffron, enough to make a bolus.

Among such medicines as promote perspiration, Dover's sudorific powder hath been highly recommended; the following forms have been also prescribed.

Take of castor powdered, fifteen grains—salt of amber, five grains—salt of hartshorn, six grains—opium, one grain—simple syrup, enough to make a bolus. To be taken at bed-time.

Or, take of powder of ipecacuanha, four grains—of liquid laudanum, one grain—of sal ammoniac, one scruple—of syrup of saffron, sufficient to make a bolus. To be taken also at going to rest.

Camphire has also been administered in these disorders, as a sudorific, with great success; and it has been advised to rub the skin with flannel cloths fumigated with camphire, and to give the camphorated julep internally, in such quantities as that a dram of camphire may be taken in the twenty-four hours. Or, it may be given in the following bolus.

Take of gum guaiacum, one scruple—of camphire, four grains—of opium, one grain—of syrup of orange-peel, enough to make a bolus. To be taken at night, swallowing after it, at different times, two or three small draughts of mustard whey.

Diuretics will sometimes remove these disorders, when the swelling is moderate; and, in weak constitutions, may succeed better than emetics and purges: these medicines are of various kinds, and are administered in different forms.

Take of the simple bitter infusion, one ounce and half—of the diuretic salt, half a dram—of compound horse-radish water, half an ounce—add, if necessary, three drams of Mindinerus's spirit, and make a draught. To be taken twice or thrice a day, according to circumstances.

Or, take of salt of tartar, one dram—of vinegar of squills, one dram and half—of peppermint water, six ounces—of the antimonial wine, two drams—of liquid laudanum, one dram—of syrup of orange-rind, half an ounce. Mix, and take one ounce as a dose.

Or, take of the filings of iron, from two drams to half an ounce—of the roots of squills powdered, one dram—of the aromatic species, two drams—of the conserve of Roman wormwood, one ounce—
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of simple syrup, enough to make an electuary; of which the quantity of a nutmeg may be taken twice or thrice a day, and after it the following draught.

Take of the diuretic salt, from half a dram to one dram and half—of pure water, one ounce and half—of compound horse-radish water, two drams.

Where the compound water of horse-radish cannot be procured, a double quantity of strong decoction of that root may be substituted.

The following pills are celebrated in dropsies; their operation is both purgative and diuretic.

Take the extract of black hellebore, and myrrh dissolved, of each half an ounce—of the dried leaves of the carduus benedictus, or blessed thistle, powdered, one dram and forty grains. Make a mass, and let it stand in the air till it is sufficiently dried to form pills, which may contain half a grain each. These pills may be taken by eight or ten at a time, at the distance of an hour, till twenty, thirty, or forty, according to circumstances, are got down; and are to be repeated in like quantities daily.

Various other remedies are prescribed for these diseases; such as decoctions of the Seneka rattle-snake root, infusions of mustard seed, juniper berries, and horse-radish, to the quantity of an ounce of each, in a quart of Rhenish wine—a like infusion of half the quantities of the ingredients, with the addition of half a pound of the ashes of common broom. And the following medicated wine and ale.

Take of fresh horse-radish root, mustard seed unbruised, and tops of wormwood, of each one ounce—of white wine, three pints. Infuse without heat seven or eight days, and strain it off. Of this infusion, from two to four ounces, according to the age of the patient, and other circumstances, may be given two, three, or four times a day.

Take of the seeds of the wild carrot, one

pound—root of elecampane, juniper berries bruised, and the seed of sweet fennel, of each half a pound. Infuse these ingredients ten days in ten gallons of strong ale, and give half a pint twice or thrice a day.

The following infusion is also strongly recommended to promote the discharge of urine in these diseases.

Take of zedoary root, half an ounce—dried squills, rhubarb, and juniper berries bruised, of each two drams—cinnamon powdered, six drams—salt of wormwood, three drams. Infuse the whole ten days in three pints of old hock; at the end of that time strain it off, and let the patient take two thirds of a pint of it in the twenty-four hours by small quantities at a time.

The complaints attendant on these diseases, may, in many instances, be alleviated without retarding the great object of a general and effectual cure.

To relieve the torture of extreme thirst, juices of fruits, reduced to the form of lozenges, or a bit of nitre, may be held in the mouth, and crusts of bread dipped in brandy frequently chewed; nor are instances wanting, as we have before remarked, of cures actually performed by indulging the patient with such liquors, and in such quantities, as his inclination directed, and his thirst demanded; and as the palate naturally suggests acids under such circumstances, perhaps if Rhenish wine with water, cyder, or juniper spirit and water acidulated with vinegar, were in such cases to be used without restraint, the consequences may be very different from those which have been generally apprehended from the unlimited use of liquids in these diseases.

Where the difficulty of breathing, which frequently attends dropsies, increases to such a degree as to be highly oppressive, medicines should be administered adapted to this complaint; we cannot however, in this case, recommend the loss of blood, unless in very strong constitutions, and in full

and sanguine habits; but relief should, if possible, be obtained by gum ammoniac, and vinegar of squills; the former in quantities from five grains to eight, and the latter from two drams to three and a half, in a tea-cupful of the patient's common drink, or any other proper vehicle, to be repeated as often as occasion may require. An infusion of garlic may also be taken, in such quantities as the patient's stomach will bear.

In case of a purging, all medicines which do not tend to remove it will be rendered useless during the continuance of this evacuation; to check which without violence, and to direct the offending matter to the urinary instead of the excrementary passages, use the following mixture.

Take of salt of tartar, three drams and half—of white sugar, half an ounce—of simple common mint water, ten ounces. Mix, and take two table spoonfuls three or four times a day.

When sickness and vomiting occur, the former may be relieved by a small quantity of the volatile aromatic spirit in peppermint water, and the latter by a gentle dose of ipecacuanha.

Where the patient is troubled with gripings, the following bolus is recommended.

Take of calomel, from four grains to six—of rhubarb powdered, twenty-five grains—of oil of mint, two drops—of salt of tartar, five grains—of simple syrup, enough to make a bolus. To be taken going to rest.

In the *anasarca*, when the legs and thighs are stiff and distended by the extravasated humour, scarifications are recommended as the most speedy means of delivering the patient from the burden of such a quantity of water: but as some inconveniencies were formerly understood to attend this practice, from the difficulty of keeping these wounds open long enough to admit of such a discharge

as might be useful, from the danger which may arise from weakening the patient by so considerable an evacuation at once, and from the apprehension of a mortification from a defect of heat in the constitution; to remove these difficulties, it has been advised to perform this operation with the scarificator commonly used in cupping, placing the instruments so as to make the wounds transversely, and setting the lancets so as to proportion the depth, and consequently the width of the incisions, to the thickness of the patient's skin; and in this way a quantity of water may drain from the legs and thighs, without the risque of inflammation, and without reducing the patient so much as to deter him from a repetition of the operation if it should be necessary. The instrument should the first time be applied on each side the calf of one or both legs, as may seem necessary; nor will it be requisite to apply glasses either before or after the scarification, but only to press the instrument upon the skin till a surface is formed sufficiently flat for all the lancets to take equal effect: these openings are recommended in all cases where the skin is so stretched as to threaten an inflammation, a bursting of the part, or a gangrene; and by making them transversely, the fluid is discharged with more freedom, and the lips of the wound do not so quickly unite; but great care is required not to make the incisions deeper than barely to penetrate the skin, and to prevent mortification by fomentations, containing proper mixtures of camphorated spirits of wine, spirit of sal ammoniac, or the like, and by the application of proper digestives.

In the *ascites*, letting off the water by tapping is generally advised when all other methods fail; but very ingenious physicians have been of opinion, that if this operation was performed in the early stages of the disease, and even as soon as water enough is collected to make it safe and practicable, it might be attended with the happiest

happiest consequences; but when it is left till the accumulated load has exhausted the patient's strength, and the vital heat is wasted by drawing off so large a quantity of the fluid too suddenly, swoonings, and even fatal effects, sometimes follow.

After these evacuations, the patient will require strengthening medicines; the bark in all forms, elixir of vitriol, warm aromatics, and now and then the compound tincture of rhubarb: the regimen of the recovering patient, both as to diet, air, and exercise, should be conformable to the directions we have already given on that head.

When other preparations of medicine are not at hand, the following prescriptions may be tried; they are all recommended as specifics, and it is not improbable but some of them may be efficacious.

Take a table-spoonful of unbruised mustard-seed night and morning, drinking after it half a pint of a decoction of the tops of green broom.

To make the decoction of broom-tops.

Boil two handfals of the tender tops of this plant ten minutes, in three quarts of water. Let it stand till it is cold, strain it off, and sweeten with honey.

Rub the affected part with sweet-oil for a very considerable time every day; the hand should be warmed, and the patient placed near the fire: the longer the chafing the part is continued, the more hope may be had of success.

Take the leaves of fenna dried and powdered, cream of tartar, and jalap, of each half an ounce. Mix them well, and take a dram every morning in broth or milk whey.

Boil two handfals of the roots of elder, for ten or fifteen minutes, in a quart of water; strain it, and drink a wine-glassful of the decoction every day. The use of it should be continued a month at least.

Express in a marble mortar a pint of the juice of pellitory of the wall, add a pound of coarse sugar, and boil it as long as any scum arises, taking it carefully off; when it is cold, bottle and stop it close. The doses are three table-spoonfuls at night, and two in the morning.

But there are also other dropsies, of which it will be necessary to speak, besides those we have already mentioned, such as the *hydrops pectoris*, or *dropsy in the breast*; and the *hydrops pulmonum*, or *dropsy of the lungs*: there are also dropsies of the ovaria, of the uterus, in the knee, and others; but as these require immediate medical and chirurgical interference, they are foreign to our present purpose. Of the *hydrocephalus*, or *dropsy in the head*, we have already treated among the diseases incident to children.

The *hydrops pectoris*, or *dropsy of the breast*, is formed by the extravasation of water in the cavity of that part of the body: the fluid is sometimes contained in hydatids or bags, which may be situated on the external surface, or in the substance of the lungs; on the surface of the heart, or in the pericardium or membrane which covers it; and in other parts about the seat of the lungs; and when this is the case, it is alike difficult to obtain a knowledge of the disease, and to effect a cure.

The dropsy in the breast may arise from any of the causes which occasion the other species; but it sometimes happens from disorders in the lungs, and frequently from a rupture of some lymphatic or absorbent vessel.

The symptoms are an oppression of the breast, and great difficulty of breathing, which is less troublesome when the patient lies down than when he sits up, by which this disorder may be distinguished from an asthma, in the more violent fits of which the patient cannot lie down. In the dropsy of the breast, not only the feet but the hands swell partially in a kind of tumor; the act of drawing in the breath is

more

more easily performed than that of throwing it out; and when one side only is affected, or there is more water on one side than on the other, that side appears larger, and the face, arm and leg, on that side, are puffed up.

Perpetual blisters on the legs, and the continued use of diuretics, are the principal remedies which have hitherto been offered for this disease; if these should fail, and the water can be perceived to fluctuate, the last resource is to draw it off by the introduction of proper instruments between the fourth and fifth of the false ribs: but for this operation a skilful and experienced surgeon is required.

The *hydrops pulmonum*, or *dropsy of the lungs*, is seated in the cellular membrane of these organs; sometimes the approach of this disease is sudden, in which case it is occasioned most probably by the bursting of an hydrotid or bag of water.

The symptoms of this disease are obscure, and the following are not always to be depended on; yet they will in most cases point it out, and especially if the attack is sudden.

The difficulty of breathing is at all times great, and increased by the smallest motion, yet it is not particularly affected by different positions of the body, so that it is equally severe whether the patient sits up or lies down; he complains of a constant anxiety and oppression of the breast, and when he attempts to draw his breath deep or strong, it seems to be suddenly stopped, and he finds himself unable to dilate his chest for the purpose; the pulse is small, low, and oppressed; the countenance puffed up and pale; the legs are commonly swelled; and the whole habit appears loose and watery.

The regimen in this disease is required to be in all respects the same as that which we have recommended in dropsies of the belly; in this case the patient should be abundantly careful not to take cold; for if an inflammation of the lungs should be complicated with this disease, fatal consequences will most probably ensue.

On the first appearance of this disease, brisk purges should be immediately administered; those with calomel are most suitable; after this the Seneka root should be given liberally: no medicine can be so likely to afford relief, for it acts powerfully by urine, and perspiration, and considerably promotes expectoration; the powder is to be preferred to any other preparation, and may be given in doses, from one scruple to a dram, once or twice a day, in any common drink; but if this should not agree, a decoction may be made as follows.

Take of the root of Seneka rattle-snake cut in pieces or sliced, three ounces—of water, somewhat more than a pint. Boil till it is reduced to the last mentioned quantity, then strain off, and give two, three, or four table spoonfuls, three or four times a day, according to circumstances.

Besides these medicines, such diuretics and perspiratives as have been prescribed in the former part of this chapter should be tried: in a disorder, of which the cure is doubtful, all attempts should be made, and sometimes one remedy succeeds when many others have been used in vain.

When all the efforts of medicine fail, and the case becomes desperate, an incision may be tried, and a puncture made into the lungs to discharge the water: but this operation is also the business of an able surgeon.

C H A P. VII.

Of the Gout.

IN treating of a disease on which so great a variety of opinions hath been delivered, and on which so many learned, ingenious, and speculative dissertations have been published, it may appear presumptuous to entertain a judgment of our own, or to offer arguments to prove, that though many, if not most of the numerous writers on this subject, have been undeniably right in some points, they have unquestionably erred in others; and that whilst some have held regimen in contempt, and pinned their faith on works of art and medical interposition, and others have carried their ideas of diet beyond the bounds of common reason, and have taught us to avoid this disease at the expence of a very considerable part of those comforts which the great Author of Nature has pointed out to us by the natural cravings and desires of our appetites after them; both sides have been equally wide of the mark: and that, on a fair state of the case, moderation is the great rule of preservation against the pains and dangers of this and other chronic diseases; and that a regimen founded on this rule, will serve to prevent these disorders, which, however, medicine may in some cases help to relieve.

Such an opinion we have however formed, as well from the writings of others, as from our own experience; and under a conviction, that a practice grounded on this opinion will contribute to lessen the horrors of this universal yet dreaded disease, and prevent the unfortunate victim of it's more violent attacks, from being oppressed in youth with the infirmities of old age, and whilst his mental faculties are in full vigour, feeling a decay of all his corporeal powers, aggravated by the keen sensations

of pain, anguish, and despair; we shall first describe the disorder with it's symptoms, afterwards speak of the causes, and then offer such systems of regimen and medicine, as seem best calculated to effect purposes in which the happiness of a large portion of mankind is deeply interested.

The *gout* is a chronical disorder, and the pain which attends it principally spasmodic: when it affects only the extremities, declines and goes off gradually, and returns at certain periods, it is called a regular fit; and when it affects the internal parts, or flies from the extremities to those parts, when it's returns are uncertain, and when it goes off and comes again with violence in a short space, and before the patient has recovered strength, it is said to be an irregular fit.

Many experiments have been made in order to discover whether the gouty matter is of an alkaline or acid quality; the result of which seems to be, that it may be either, or rather, that it is sometimes one, and sometimes the other, and that if no chalk-stones or knots are produced, or they come on but very slowly, and the limbs affected swell partially and considerably, the disorder is occasioned by an alkaline humour; but if these symptoms appear suddenly, or increase rapidly, it is caused by acids; or, as this question has been defined by a very ingenious, though we confess somewhat speculative writer, when the *cause* is a predominant *alkali*, the *effect* is a *relaxed, moist, and putrid* habit, and when the predominancy of the *acid* occasions the disease, the *effect* is a *dry, tense, or inflammatory* disposition of body.

With respect to the formation of chalk-stones, different opinions have been held,

and those equally curious and unsatisfactory; some conceiving that these are strong concretions formed by earthy particles in the human aliment, and others apprehending that they are created from a redundancy of bony matter, separated by small arteries, and thrown upon the membranes or cartilages.

The first attack of the gout is commonly sudden, and happens generally in the winter, or in the early months of the year: the regular fit is usually preceded by indigestion, wind in the stomach, drowsiness, pain in the head, heartburn, sickness, and sometimes a disposition to vomit; weariness and loss of spirits, though the appetite is sometimes particularly keen a very short time before the approach of the fit; the patient complains of a sensation like wind, or cold water passing down the thigh, and the discharge of urine is attended with a slight pain. The fit generally seizes the patient about the middle of the night, or very early in the morning, and most commonly in the great-toe, though in some instances it fixes first in the foot, ankle, or calf of the leg; the pain is accompanied with a sense of pouring cold water on the part, and is soon followed by a shivering and degree of fever, more or less considerable according to the violence of the fit; after this the pain increases, and extends to the small bones of the foot, where it rages for about twenty-four hours, during which time the patient endures variety of tortures, the part by turns seeming to be burnt, stretched, extended with extreme violence, and gnawed by voracious animals: towards the morning, after the night which succeeds the attack, the patient's strength seems exhausted, and without perceiving that he is more at ease, he falls into a sleep, which appears to be produced by mere fatigue, but during this interval a perspiration comes on which carries off the paroxysm; but a fit of the gout consists of several such, sometimes in the same and sometimes in other parts, the

number, frequency, and duration of which, depend on the quantity of gouty matter, the age and strength of the patient, the season, and other circumstances; but these seizures become less and less troublesome as the disorder declines, till the pain is only slightly felt towards night, and goes entirely off before the morning: whether the fit be of longer or shorter continuance, a proportionable degree of tenderness will remain, and even if the pain ceases after the first paroxysm this inconvenience will be left behind; nor is it an uncommon case for a short fit of the gout, which does not last above two or three weeks, to occasion such weakness and soreness, as to render the patient unable to walk for as many months.

This attack is in most cases repeated the following year, about the same time, and that with increased severity; sometimes it does not return till the second year, but each succeeding fit grows worse than the former, till in some instances the continuance of it is for several months, and the paroxysms or relapses so frequent, that the intervals of ease do not allow the patient to recruit his strength, and he becomes a perfect cripple.

But to this state the approaches are more or less rapid according to circumstances; one man will have regular short fits for a number of years, during which the symptoms will not appear to be much aggravated, nor the patient's constitution to have suffered any material injury; whilst two or three returns of the disorder will not only deprive another of the use of his limbs in the intermissions, but make such ravages in his whole frame, as to place him beyond every hope of the future enjoyment of health or comfort.

Nor are these the only consequences which may be dreaded from this disease; it sometimes degenerates into a dropsy, or terminates in an asthma, in either of which cases the debilitated habit of body renders death unavoidable.

So many various causes have been assigned for this distemper, that it would be almost as impracticable to enumerate them, as to trace the different remedies which have been prescribed for the cure of it: we are not inclined to place any very great degree of confidence in the accounts which have been given either of the one or the other; many of the causes to which it has been attributed we apprehend to be chimerical, nor are we better satisfied with the histories of cures, which are said to have been performed by specific medicines, the numbers and variety of which would furnish no despicable catalogue.

It has been ascribed to sitting up late, close application to study, and intense exercise of the mind; to grief, vexation, and anxiety; to passion and discontent; and to those causes which are made to account for most of the indispositions of the human body, colds, obstructions, and checked or impeded evacuations.

But almost all these causes, as well as others much more probable, have with many speculative persons given way to an idea, that this disease is hereditary, and transmitted from father to son as a patrimonial right of inheritance; a fatal error, calculated to mislead men from the only path in which they can hope to travel the journey of life, without being interrupted by this powerful enemy to ease, comfort, and happiness.

Nothing can be more true than that the gout may be increased, that is to say, the fits may be prolonged and the pains heightened, by most of those means which we have just mentioned: the want of exercise, which necessarily attends sedentary employments, will dispose the body for every disorder, and for this in particular; passions and anxiety create a degree of fever which cannot fail to assist the operations of disease: and colds and obstructions may prevent much of that morbid matter which constitutes the gout from passing off by

perspiration; and, counteracting the efforts of nature, may render the fits more frequent and more acute.

Nor is it less certain that this disorder is often to be met with in families, descending in a direct line from father to son, as a seeming appendage to that estate from which, as well as this accompaniment of it, the daughters are almost universally excluded; and we are ready to allow, that the family settlements contribute considerably to the perpetuating this disorder, though we can by no means admit, that of necessity it follows the blood any more than the inheritance of the ancestor.

The gout is a tax justly imposed on *laziness, luxury, and discontent*; it is a tribute which we yield for the indulgence of our appetites, and the gratification of our desires and passions: by our own faults and follies we bring it by slow and imperceptible degrees on ourselves; and we must be content to pay the forfeit of our imprudence, ontread back the steps we have taken, for which no small stock of patience and perseverance is necessary, since it hath ever been acknowledged that a retrograde motion is much more tedious, tiresome, and difficult, than a progressive.

But positions so contradictory to our wishes and inclinations are not easily admissible: if we attribute the gout to sudden and accidental causes, we expect to find certain and speedy remedies for it, and apply to the physician for a cure of the disease, for which, as the cause is known, he is supposed to be furnished with a variety of prescriptions; and when we can load our parents with the heavy charge of entailing on us the curse of gouty habits, we rid ourselves of the disagreeable task of submitting to rules and regimen to conquer a disease which we chuse to consider as hereditary, and therefore incurable; and voluntarily consent to languish in pain and misery, deriving consolation from the reflection, that we have not brought it on ourselves,

selves, and that all attempts to remove it are vain, and refusing to listen to the arguments of reason and truth, lest they should overthrow an hypothesis, which, however contrary to our real interests, we feel ourselves *inclined* to support.

Those who labour under the former infatuation, will do well to look round them, and try if they can discover a single instance of a radical and compleat cure of this disease effected by medicines administered under the prescriptions of the most skilful physician, or the nostrums of the most popular and apparently successful quack: but in making this inquiry, he must be careful not to confound intermissions for cures, nor to consider in this light the absence of pains and inflammations in the limbs; when, in exchange for those complaints, the patient's constitution is ruined, and instead of one disease, he feels himself oppressed by a number.

To those who claim the gout by descent, we recommend an enquiry into the variety of cases where this disorder hath been totally and effectually cured, (though not by medicine) and no other arguments will be necessary to invalidate their pretences to it; because it is obvious to the plainest understandings, that the disease which admits of being totally eradicated, cannot be such a one as may be communicated from generation to generation.

But if the advocates for hereditary gout should still require better proofs of the improbability of this doctrine, before they can bring themselves to renounce a favourite opinion, let them ask if the gout is to be found in families after they have been divested of those fortunes, from which, rather than from the course of blood, this disorder has been derived; and, as luxury and extravagance generally go hand in hand, it will be no difficult matter to discover the descendants of men, who have wallowed in wealth and disease, reduced by the imprudence of their ancestors to earn by bodily

or manual labour the means of subsistence: is the gout more frequently to be met with among such than among others of the class to which they are fallen, and is the curse of distemper entailed on them, and the means of alleviating their miseries denied, merely for the sins of their forefathers, and without any guilt of their own? The supposition would arraign the justice of Heaven, and facts contradict the existence of the evil: the excess and indulgence which are the usual consequences of wealth, create and nourish the disorder; poverty, which is the parent of labour, brings, as a compensation for the gifts of fortune, Health, the choicest of blessings.

Let it then be admitted, that the gout is neither accidental nor hereditary; that it is neither unavoidable from any combination of natural circumstances, nor of necessity imposed on us at our entrance into the world; and it will follow of course, that it must be occasioned by one or more, most probably all the causes we have already assigned; and that indulgence and excesses, either corporeal or mental, produce this formidable disease.

But before we proceed to consider in what proportions *laziness*, *luxury*, and *discontent*, contribute to the creation and maintenance of this disorder, it may be proper to observe, that when we attribute the gout in general to one or more of these, as the immediate causes, yet we do not undertake to assert that this position admits of no exceptions; some few instances may be found wherein fevers, and even other chronic diseases, have either degenerated to or terminated in the gout: but it is not unlikely, that, by an investigation of the former case, the origin may be traced to the same sources, and the fever or other disorder be found to owe it's existence to the imprudences which we have pointed out as the primary causes of the gout.

Nor are we to conclude, because in a variety of instances we see the idle, the pampered,

pered, and the dissatisfied man, pass through life without being attacked by this disease, that we may follow his example with impunity, and that excesses which do not affect one man, cannot possibly injure another; as well may we court the perils of tempests, fire, and the sword, and contend that no precautions are necessary against the unfavourable elements, because some have escaped their fury unhurt; or rush into battle without apprehension, because the same fate does not await every individual: from whatever quarter well-founded fears of danger threaten, prudence directs us to avert the storm, and he who confides his safety to the chance of its passing by, will too often, and not undeservingly, be overwhelmed by its bursting over his head.

But, besides such as favour the opinion of hereditary right to this disease, and those who contend that it arises from accidental causes, there are others who take it in their heads to suppose, that there is some distinct ingredient in different constitutions, predisposing each to some peculiar disease, and so account for one man's being gouty, a second asthmatic, and a third dropical, and that under this pre-disposition of body, it is impossible for any one to pass through life, without being attacked by the particular disorder allotted him in the original composition of his frame; and fantastical as this idea appears to persons of sense or consideration, it prevails so strongly in the minds of some men, that they actually forego the means of preserving and restoring health, from a conviction that it is impossible to avoid diseases to which they are by constitution devoted.

It is almost unnecessary to assert, that such prejudices are without any foundation in nature; that the difference of constitutions depends only on some being more strong or more weak than others, and that even this difference arises much more from acquired than natural habit: mismanagement

will render the strong weak and sickly, and prudence will get the better of the tenderest habit, and expelling disease, introduce health and strength in its stead.

Nor do an athletic make and a robust appearance always denote a vigorous constitution: many, whose frames seem calculated to defy the approaches of distemper, are valetudinarians through life, and others of the most delicate and puny figure enjoy perfect and uninterrupted health; even those which are called the diseases of old age, are not the necessary attendants on that stage of life, for many have lived long beyond the common computation of mortal existence, without feeling the inconveniencies of illness, or the pains of any one malady.

Hence it is apparent, that this disease does not spring from any natural defects in our constitutions, any more than that it is produced by accident or derived from descent, but must be ascribed to one or more of those causes of which we now proceed to speak.

Whoever carefully examines, and attentively considers the human fabrick, will be at no loss to discover, that in the original formation of it, Providence ordained that every man should seek his own subsistence by labour, and that this dispensation was wisely and graciously calculated to give the relish of health to the blessings which awaited the efforts of industry, and a zest to the enjoyment of those pleasures which naturally resulted from a combination of health and plenty.

And in the earlier ages of the world, when the inhabitants of the earth were scattered so thinly over the face of it, that the property of the soil was held in little estimation, and when the wants of mankind were confined to necessary food and cloathing; both which were the acquisitions of mere labour, for which each man was alike qualified, and in the procuring which every individual was equally interested; the life of man was interrupted by few diseases, he

arrived at extreme old age without the aid of the physician, and excepting the accidental interposition of external injuries, felt the first tokens of indisposition in a gradual decay, and received the first intimation of approaching death from the infirmities of a body bending only under the weight of years.

But as the world grew more populous, a necessity arose that property should be ascertained; societies were formed for the protection of it, and as order could not be maintained in those societies without a certain degree of subordination, rank, precedence, and the power of governing, was naturally yielded to those who possessed the most enlightened understandings, or the most enterprising spirits: an extraordinary accession of authority produced respect and deference, and presents, the tokens of that respect, placed some individuals in a comparative state of wealth; to these, personal labour became unnecessary, and the pleasures of society drew off their attentions from the necessity of substituting exercise in it's stead; and thus originated *indolence* and *inactivity*, which by a variety of gradations in a natural chain of events, have now extended their influence over a very large portion of mankind.

Those who have considered a destination to labour as an evil, seem either to have forgotten, or not to have understood, the relation between activity of body and health: labour, sufficient to procure the means of subsistence, is the degree of exercise which the body was originally designed to take, and which is absolutely necessary for the preservation of health, and was therefore ordained for the good of man; and he who, instead of this salutary provision of Providence, indulges in a life of laziness and indolence, undermines the foundation of his happiness, the health and vigour of his body, and establishes a lasting fund of sickness, disease, and wretchedness.

And this will be more easily understood,

if we consider that health and strength, and of consequence spirits, depend upon parts of the body so very minute as to be almost invisible; upon those very small tubes or pipes which are continuations of the larger blood-vessels, through which the finest parts of the blood must constantly find a passage, and by being forced through which the globules are broken and divided, and prepared for a still smaller set of vessels, through which it again undergoes the same operation, and so on, through still less and less, till they become too minute for the sight, even with the assistance of the microscope.

To keep up an equal and continual motion of the blood through these innumerable small vessels, requires the assistance and combined force of all the muscles of the body to act at different times upon the veins, and to hasten the circulation of the whole mass of blood, the strength of the heart and arteries alone being insufficient for this purpose: this aid can only be obtained by exercise or labour, in which the muscles are principally employed; and it is for want of exercise that the passage of the fluids through the more minute channels is stopped, and the vessels themselves dried up, by which means the indolent either become pale and emaciated, or are overburdened with a sickly and unwholesome fat, according to different habits of body; but in both cases are languid, faint, and oppressed by the least motion, the blood being either impelled through the larger and unobstructed veins, in quantities too great to be contained without producing that kind of suffocation which occasions the foregoing symptoms; or the smaller vessels being by the sudden and unusual operation of the muscles violently expanded, the blood rushes through them towards the surface of the skin, and occasions a glow or flush, which very observably attends the exertions of those who lead sedentary lives.

Indolence

(Indolence or inactivity having thus formed obstructions in those exquisitely fine parts, the health of body and vigour of mind are of consequence impaired; a ground-work is laid for future diseases, which take place according to circumstances, by means of colds, excesses, or even the increased powers of those very obstructions, and which the active and laborious never feel.

Nor are these obstructions the only evils produced by inactivity or indolence; want of digestion, and loss of appetite, are the natural consequences of such habits. The sprightliness and alacrity which accompany an active life, that hearty appetite which needs no relish of sauces, and that light and pleasant digestion which follows the meal for which the stomach is prepared by exercise and labour, arises from a constant supply of new blood prepared from the food, and distributed daily through all parts of the body; and he who lives beyond a day with the same blood, will feel an alteration in his health and spirits: but the joint action of every part of the human body is necessary, as well for the preparation and distribution of the new blood, as to make room for it by throwing off the old, which must also be regularly performed, or the vessels will be over full, and diseases arise from that cause. But in a state of indolence neither of these processes will be regular; that insensible perspiration which should carry off the old blood, prepared for the purpose, is insufficient to answer that end, nor will there be any vacancy in the vessels to receive new blood should it be formed; hence the appetite, the desires of which were originally instituted to furnish supplies, will diminish, or if it is stimulated, indigestion will follow; and the temporary, uncertain, and in most cases inefficient aid of medicine and art, will be required by drugs and physical preparations to procure a false digestion, and by artificial drains and evacuations

to carry off the superfluous juices; and how far these will assist, may be judged by reflecting, that in perspiration those juices only are thrown off which the powers of Nature have prepared and separated as useless or noxious; but bleeding, issues, setons, and blisters, draw away a mixture of all the fluids, and not only ease the body of such as are injurious, but deprive it of those which are necessary to its health and well doing: and thus men seek the violent efforts of art, which are always precarious, and generally unavailing, in preference to the simple, easy, and certain action of nature; and, persisting in habits of *laziness* till they become unconquerable, lay the general foundation of disease, the nature of which will be governed by the constitution or accidental circumstances. Those who are originally robust and vigorous will perhaps escape with being crippled with the gout, or racked with rheumatism; and those who are less able to resist the consequences of their own fault, must in all probability submit to a more speedy fate in palsy, jaundice, colic, or gravel and stone; or to all the miserable train of hysterical and hypochondriacal complaints.

The appetite, blunted and spoiled by *laziness*, *Luxury*, like a false friend, offers its assistance, and we conceive the flattering hope of restoring it by high sauces and rich wines: the tempting sensualities of the table and the bottle, procure a respite from the languor of body and depression of spirits which accompany approaching disease; but the relief is merely temporary, and a continued repetition of the same course is absolutely necessary; each day adding to the excess, as the difficulties of suspending the pain and anxiety increase, till Nature, worn out with perpetual importunities, refuses to perform her offices, and the disease, whatever it be, becomes perfect master of a constitution filled and prepared for its reception and entertainment by the united endeavours,

endeavours of indolence and intemperance.

Nor is the luxury and intemperance of which we now speak confined to what are commonly esteemed excesses in food or liquors; whoever eats or drinks more than he can easily and readily digest, or feeds on such diet as disagrees with his constitution, commits excess; and whether diseases are begot by the gluttony of turtle feasts and hogsheds of claret, or by two plentiful meals a day of beef or mutton, and copious potations of humble Port, they will alike be derived from intemperance, and produced by our own faults and follies.

The temperance necessary to health, and by a conformity to which men may hope to pass through life without being visited by gout and other chronic diseases, has been described as many different ways as there have been different writers on the subject: one recommends a milk diet, and a total abstinence from animal food; another asserts that vegetables and bread are the only proper materials for our aliment; a third forbids wine as the sole cause of these disorders, and with wonderful ingenuity weighs the aggravated evil of every glass that is swallowed in a scale of his own invention, and supports his ideas with some appearance of reason, and with great plausibility of argument; and a fourth admits of animal food and an occasional debauch with the bottle, but warns you against the dangers of eating a pickled cucumber with your leg of mutton, or horse-radish with your beef-steak, and considering bread as the most prejudicial part of your food, and salt, vinegar, and pepper, as equally injurious, leaves you to a banquet of flesh alone, without even common seasonings to distinguish your dishes from the reeking delicacies of the Tartar, or the dainties which grace the table of the native American.

With great deference to the respective judgments of these irreconcilable purveyors for the human appetite, we beg

leave to differ materially from the opinion of each, though the system of temperance we mean to adopt will in some respects derive assistance from every one of those plans, from which we conceive it will be no difficult matter to establish regulations for the preservation of health, without depriving mankind of the comforts of life or the pleasures of society; without denying them those kinds of food which Providence seems to have allotted for their support; and without depriving their tables of the pleasure of variety, or the relish of plain cookery and unhurtful sauces.

And this we apprehend may be effected by consulting our constitutions and habits of body; by observing what quantity and what kind of food sits light and easy on our stomachs, and digests speedily without leaving a load, sickness, sourness, or uneasiness; by a determination never to eat a morsel after the calls of nature are satisfied, or to whet the appetite by great variety at the same meal, or by rich, poignant, or highly seasoned dishes: to attend with the like care to the operation and effect of liquors; to avoid whatever is foul or unconcocted, whatever heats the body or occasions acidities in the stomach, and to accustom ourselves to small quantities of even common drinks, and less of wine or other strong liquors.

Nor are these the only rules which *moderation* requires us to observe; our desires are sometimes mistaken for the calls of nature, and therefore must at all times be distinguished from them; we are sometimes prompted by inclination to eat a hearty flesh supper, after having made a plentiful dinner of animal food; yet far from requiring such an indulgence, the weight and indigestion which follows, proves evidently that Nature is offended at the unreasonable imposition; our desires sometimes induce us to drink larger draughts than usual, but Nature shews her disapprobation by headaches, nausea, and in some cases actual rejection:

jection: if we take Nature for our guide, and follow her directions with little variation, we shall seldom wander from the paths which lead to health, or bring on disorders by any species of excess or intemperance.

Under these rules we may venture to assert, that the moderate enjoyments of the table, and even the bottle, are by no means incompatible with an earnest desire to taste the blessings of health in their fullest extent, or to prolong the existence of life and the vigour of constitution to enviable old age; for we are of opinion that a great deal of mischief may be done by abstinence from necessary sustenance, and over strict regimen, in this particular, though perhaps not altogether so much as by gluttony and inebriety.

The *moderation* which we recommend, will constitute a course of life equally consistent with health and pleasure: let men eat till nature is fully satisfied, but not till she is fated; let the food be generally plain roast and boiled meats, with little other sauce than it's own gravy; let it be rather under-dressed than dry; and let it always be accompanied with a considerable portion of vegetables, and a reasonable quantity of good and well-baked bread; let the supper consist of light things, rather of fruits, biscuits, or vegetables, than of animal flesh; to those who have accustomed themselves to suppers, shell-fish of all kinds will be found equally agreeable and innocent; milk chocolate, milk broth, or gruel, will be a wholesome and nourishing breakfast, but we do not disapprove of tea, provided it be taken with cream and sugar, and not swallowed scalding hot.

Spices and seasoning should be very sparingly used; the habitual use of pepper, vinegar, mustard, and other stimulatives, blunts the palate so much, as in time to render large quantities of these incentives necessary to produce any effect at all, and by this means these articles contribute largely to the production of disease; though taken

occasionally, they may not only be innocent, but actually salutary.

For drinks at meals, a draught or two of good, sound, and fine table-beer, or of cyder of the same description, may be admitted without danger; those who require repeated draughts, will do well to take now and then a glass of water, instead of large quantities of stronger liquors, and we would advise the last liquid swallowed at table to be a moderate quantity of this light and digestive element.

To those who are in the habit of drinking after their meals, some cautions will be necessary; they must be warned not to pass the bounds of moderation, which they do whenever they exceed the quantity of two or three glasses of good wine, or a like proportion of mild ale or sound porter; but they who have resolution enough to break through this custom wholly, and content themselves with quenching their thirst, will feel the advantage of this self-denial in a better digestion, and in the use of these liquors as cordials in sickness, languor, weakness, or the pressure of unfortunate events.

Spirituous liquors and punch are by no means to be admitted, except in particular cases small quantities of the former by way of medicine: the pernicious custom of quaffing large bowls of the latter boiling hot, is little better than taking liquid fire into the stomach; though the operation of this mixture may not be quite so sudden, it never fails to consume by degrees the stoutest and most vigorous constitution.

We have omitted, as unnecessary, observations with which every medical book is replete, and which are not only to be found in the mouths and writings of physicians, but in the volume of common reason and sense—that meats hardened with salt and smoke resist the powers of digestion, and are therefore unwholesome and pernicious—that all animal food tending to putrefaction, the acid of vegetables is necessary to prevent that tendency from going too far—

that animal flesh, which has undergone the operations of refined cookery in stews, ragouts, and fricassees, in pickling, potting, and preserving, has lost its light and nutritive juices, and imbibed the heterogeneous and pernicious qualities of the pungent, acrid, sour, and heating ingredients, with which it is mingled and sophisticated—that whatever food or liquid has a tendency to acidity is destructive to health, because the original cause of all chronic diseases is an acid crudity prevailing in the juices—and that sweet-meats of every kind, and whatever is fermented, either in the form of liquids or solids, are of an acedent nature, and produce, by fermentation in the stomach, wind, vapour, fumes, and that universal symptom of diseases occasioned by imprudence in the article of diet, which is commonly called the *heartburn*.

Nor have we conceived it requisite to point out the particular dishes that should be eaten, or the kind of wine that may be drank, with least hazard of incurring disease: it is not in every man's power either to indulge his choice, or to follow advice in these particulars; but every man can discover what quantity over-loads his stomach, and is at liberty to regulate his meals in this respect.

Having, we trust, sufficiently shewn how far *lazinefs* and *luxury* may be considered as the original principal causes of the gout; it remains for us to consider in what degree discontent of mind, vexation, grief, or anxiety, may be supposed to contribute to the existence and continuance of this disease.

And though it is not in human nature to resist wholly those impulses of passion which arise from injuries either sustained or apprehended; though it may not be either in our power or our inclination to lose at once the remembrance of a departed friend, or to conquer the anxieties which are occasioned by a ruined fortune; yet Reason may be called in to regulate the violent transports

of grief, and to limit the duration of vexation; and her directions will in all cases help us to restrain the discontent which arises from ordinary disappointments, and the chagrin which is brought on by those inconveniencies, which we only endure in common with the rest of mankind.

The first effect of *anger*, *grief*, or *vexation*, is to take off the action of the stomach, and destroy the powers of digestion; and this is a consequence so universally felt, that there are but few persons in the world who have not at some time or other experienced it, though it is not to our present purpose to enquire what connection subsists between the digestive faculties and the animal spirits, a disquisition well worth the attention of the learned and ingenious.

But the mischief does not stop at this pernicious effect of obstructing the natural powers of the stomach and intestines; the circulation of the blood is affected by it; the motion of the heart, which in perfect health is as regular as that of the pendulum of a clock, is disturbed and agitated; the vibration becomes interrupted and uneven, and flutterings, palpitations, and other symptoms of a redundant flow of blood to the heart, are succeeded by languor, faintings, and other signs, that it does not receive a due quantity: under this irregularity in the great functions of life, the secretions must be equally uncertain; and this accounts for the quantities of pale urine which are discharged by those who are under the immediate influence of particular passions; for the torrents of involuntary tears which flow with irresistible violence in those circumstances; for the overflowing of the mouth with water instead of saliva or spittle; and for the variety of other nervous and hysterical appearances which are known to proceed from the unrestrained operations of different passions.

Hence epileptic and other fits, swoonings, flow fevers, and many other kinds of diseases,

diseases, the causes of which have often puzzled the most skilful physicians, and left them to attempt the cure of a disorder, for the origin of which they have been totally at a loss.

Not that these effects are always immediately visible; grief and vexation sometimes act almost imperceptibly, gaining ground on health by slow but sure gradations, producing first a decrease of appetite, then heartburn, and rising to indigestion by regular steps; under these circumstances the aliment which is conveyed into the stomach either turns sour, rancid, and bitter, or hastens through the body without suffering the necessary changes, so that the requisite wholesome materials of nourishment do not pass into the blood, and the patient's habit of body becomes universally bad, and he either wastes to death in an atrophy, or receives a respite in the form of the gout or some other chronic disease.

Want of sleep is another evil produced by discontent or anxiety of mind: he whose soul is tortured with grief, or corroded by disappointment and care, will find thorns in his pillow; the solitary moments which should be dedicated to repose, will be filled with restless anguish; if he slumbers, he will be disturbed by dreams, and haunted by fantastic ideas; the object of his uneasiness will be perpetually before him; and the little rest he obtains will be unnatural and unrefreshing.

It is in sleep that all those works which contribute to nourishment are performed, and those fine and delicate parts of the human body which are worn and fatigued with the unremitting service of the day, are renewed in strength and restored to vigour; in sleep, the action of the body is universally regular, an equal distribution of blood takes place to an atom, each minute vessel receives it's portion without the smallest obstruction or hindrance, and in consequence the pulse is regular and slow, the breathing deeper and more equal, and a like de-

gree of warmth spreads through the whole frame, from the extremities to the immediate seat of life.

But all these necessary functions of nature are impeded by the effect of vexation or discontent, operating so as to weaken the organs of digestion and concoction, and to disturb and obstruct the regular progress of nutrition, and producing the same diseases as are occasioned by a course of continued intemperance and excess; for indigestion, whether it proceeds from the ill quality and improper quantity of food, or from the influence of the causes last mentioned on the digestive powers, will equally occasion heartburn, flatulencies, hiccups, belchings, and all the train of symptoms which usher in the gout, which is universally admitted to be a disease of crudity and indigestion.

That violent passions of other kinds may also be in some measure productive of this, as well as other chronic diseases, cannot be doubted; nor need we adduce any other arguments in support of this opinion, than may be found in a preceding chapter of this work, wherein we treated of *the effect of the passions on the health of the human body*.

If from the foregoing pages it shall appear that the causes we have assigned are undoubtedly the original sources of this disease; from a compliance with the very few easy rules we have laid down respecting *exercise, moderation in diet, and serenity of temper and disposition*, great hopes may be entertained that this troublesome companion may be for ever excluded from our constitutions; and that instead of looking forward to the summit and decline of life with the horrid apprehensions of excruciating pains and consequential infirmities, we may rejoice in the prospect of an easy, vigorous, and comfortable old age, and form flattering expectations of the enjoyment of life to the latest period of it's existence.

It remains, that we point out the regimen and treatment necessary to be observed by those

those who already labour under this disorder, the medical assistance which may be given with safety and propriety, and the means which offer for the repair of a constitution broken down by repeated fits of the gout, and injured either by improper medicines, or by erroneous and imprudent management.

As this disorder proceeds in a great measure from indigestion, however produced, and the approach of the fit is accompanied by fever, the appetite of the patient fails, and Nature wisely ceases to prompt his desires for food, which would only serve to nourish the disease; in this case the suggestions of common Reason should, one would imagine, direct us to avail ourselves of the hint she gives, and to assist her efforts with low diet and diluting liquors; but how contrary is the practice! No sooner does the patient refuse to eat, than strong wines and rich cordials are administered, *to keep the gout out of his stomach*; and what is the consequence? Why the fever, thus urged, rages more violently, the paroxysms are increased, and the duration of them extended; the patient's strength is reduced by the continuance of the fit, and the disease at last seizes the vital parts: when, harried with fever, and worn down with pain, his constitution is unable to withstand the attacks of an enemy so injudiciously reinforced, and he falls a martyr to a disorder, which nature and proper medical assistance would perhaps have carried off in less time than is spent in those endeavours which bring him to the grave.

But should these ill-judged offices of kindness terminate less fatally, and should the patient, after the torture of a month or two, escape with life, the parts will in all probability be so obstructed and weakened, that he will be left a cripple, and the very means used to restore him to any degree of strength, will, in most cases, serve to bring on another fit.

The constitution, habit of body, and ac-

customed manner of living of the patient, must, however, regulate the regimen as to food and liquors during the fit; in most instances, sago, milk, and thin broths, should constitute the food, and small diluting liquors the common drinks: if the patient has been differently treated in former fits of the same disease, or if his course of life in the intervals is commonly high, it may be necessary to indulge him with even animal food, and a small quantity of wine; but the proportions of both should be restricted, and he may be brought by degrees to dilute the latter with water, so as to deprive it of its inflammatory qualities. Wine whey may also in these cases be admitted, and a little spirit of sal volatile, to the quantity of a tea-spoonful, or less, taken in a draught of the last mentioned liquor at night, will considerably assist perspiration, the promotion of which is of great consequence in this disease; sage-tea, acidulated with the jelly of currants or other fruit, or with the elixir of vitriol, will also be an agreeable and useful mixture for common drink.

The parts affected should be kept warm, and the perspiration be excited, and this is the most likely means to discharge the gouty matter with speed and safety: for this purpose flannels, furs, or soft wool, may be used indifferently; though some are of opinion that wool prepared by combing, and applied in the oil which is used in that operation, is most efficacious.

As long as the pain continues to be acute, and till the part is considerably swelled, it will be proper that the patient should remain entirely in bed; and even after the pain and inflammation are abated, it will be adviseable for him only to sit up in the middle of the day, until he has regained strength enough to use some kind of exercise.

During the paroxysm medicine can afford but little assistance, yet the raging violence of it may be alleviated by gentle and tenderly operating laxatives; some have recommended

commended a mild emetic in the first instance, where there is a sickness or uneasiness of the stomach, and for that purpose have directed a small quantity of ipecacuanha, or only to assist the intentions of nature by carduus or camomile tea; but we apprehend the operation of vomiting should in this case be excited with caution, and that the following opening medicines may be used with more safety and equal success.

Take of infusion of fenna, from two to three ounces, according to circumstances—of Glauber's salts, two drams—of spirituous mint water, three drams. Make a draught, to be taken at night or early in the morning.

But if the fit is not remarkably strong, or attended with any extraordinary degree of heat, the following.

Take *tinctura sacra*, or the sacred tincture, and the tincture of rhubarb, of each from four drams to an ounce, according to circumstances. Make a draught, to be taken at night.

And if the last mentioned draught was taken as soon as the symptoms of approaching gout appeared, and repeated once or twice, the violence of the threatened disorder might be much lessened, or probably the whole of the complaint prevented.

Nor will small doses of magnesia, or such other medicines of the same class as serve to absorb and correct the acrimony of the juices, be improperly administered; and when the pains are violent, gentle opiates may be given without the usual apprehension; for this purpose either the saponaceous pill, or a few drops of the liquid laudanum, may be used discretionally: ease and sleep promote perspiration, which is the great channel of relief in this disorder.

The common practice of vomiting, purging, blistering, bleeding, and drains, as in other fevers, we have ever considered

not only as inefficacious, but as actually prejudicial; at best, the relief procured is but temporary, and this is obtained at the expence of reducing the patient's strength, and injuring his constitution, by depriving him of a quantity of wholesome juices as well as the morbid humour: very gentle emetics, under particular circumstances, such laxatives as may serve to keep the body open, and the loss of a small quantity of blood where the patient is young and vigorous, are the only evacuations that ought to be permitted in the gout; the latter operation will in some cases mitigate the pain in a severe fit, and render it endurable, and perhaps may be a better way of treating it with regard to future consequences, than suffering it to take it's course, without any attempt to alleviate the patient's anguish, or shorten the duration of the paroxysm.

Endeavours to obtain relief in this disorder from external applications are very generally decried; and where they tend to repel the gouty humour after it has been thrown upon the extremities, they are unquestionably pernicious and dangerous; but we are inclined to believe, that cataplasms of bread and milk, or such other mild composition, may be applied with safety to the raging limb, which would considerably assuage the pain, without checking the progress of the disease: poultices of rye meal have been recommended, but we have known instances where they have rather augmented than diminished the pain, and where the application of them hath been followed by extreme and unusual weakness of the parts.

The following medicine hath also been recommended, whether the gout is accompanied with a considerable fever or not.

Take of the volatile tincture of guaiacum, half an ounce—of the mucilage of gum Arabic, as much as will conveniently incorporate the tincture; add by degrees an ounce and half of barley-water, and half

an ounce of the balsamic syrup. Make a draught, to be taken at going to rest, and to be repeated twice or thrice in the day as occasion may require.

When the fit declines, the skin begins to peel off, and the urine drops a considerable sediment, it will be right to administer a few doses, more or less according to circumstances, of the tincture of rhubarb, prepared with gentian, orange-rind, and other bitters, or of some other bitter stomachic purge; after which the following mixture may be taken twice a day, in quantities from two to three table-spoonfuls, in proportion to the age and strength of the patient, and the manner in which he is affected by the consequences of the attack.

Take of the bark in powder, two ounces—of dried orange-peel, one ounce and half—of Virginian snake root, three drams—English saffron, and cinnamon bruised, of each two drams—of French brandy, one pint and half. Infuse a few days.

But if the patient's stomach will bear it, an ounce of the powdered bark may be divided into twelve parts, and one given in a glass of wine and water, or wine alone, twice a day, instead of the foregoing mixture.

The following strengthening draught is also recommended.

Take of the simple bitter infusion, one ounce and half—aromatic tincture, chalybeat wine, and syrup of saffron, of each one dram. Make a draught, to be taken twice a day, about noon and in the middle of the afternoon.

But though the efforts of medicine may alleviate the violence of the pain in severe paroxysms of the gout, and contribute to the restoration of strength after the symptoms are abated, yet we must look to other means for the cure of the disorder, and for the prevention of those returns which

will surely follow the continuance of the same course of life by which it was originally produced.

Whoever has seen a gouty patient labouring under the acute pangs of the disease, and suffering the inconveniences which arise from the consequent weakness and debility, or has heard him not only lament his immediate anguish, but express the keenest apprehensions of the more distant effects of it, would be apt to conclude that no terms could be offered on which he would not accept future ease, health, and strength: yet so generally do our appetites get the better of reason, that though a certain cure is held out to him on conditions compatible with the enjoyment of all the pleasures of life, he prefers returning to his former habits, with the certainty of being again visited by the same disease, aggravated as he has reason to apprehend every succeeding fit will become, to the purchase of an indemnity from pain, at the easy price of giving up his propensities to indolence, excess, and ill humour, and pursuing a system in itself infinitely more rational, as well as more salutary, and which, after a very little practice, would become as pleasant as it is profitable.

Such a system we now mean to offer to our readers; and to such of them as have prudence enough to embrace, and patience enough to persevere in it, we may venture to promise a perfect cure of a disorder, which, whatever may be pretended by presuming empirics and interested practitioners, has ever baffled the efforts of medicine, and the skill of the most able and ingenious physicians.

We shall begin at the period when the fit is on the decline, and set out with a full persuasion, that a proper attention to rules and regimen will render the return of it improbable in most cases, and lessen the violence of the return in all.

Before the patient is able to exercise himself by the use of his legs, let his body, and all parts of it, be gently rubbed and chafed with

with dry warm flannel cloths, or a flesh-brush, and let this be continued till a gentle perspiration is excited; at which time it will be proper to give over, and to cover the patient either with his cloaths, or in the bed, if he has not yet left it, as speedily as possible; and this practice should be repeated several times in the day, or at least morning and evening.

His next effort must be to walk, and he must not be induced to abandon his attempts to use his legs by the pain and fatigue which it will at first necessarily occasion; the inconveniencies will decrease and wear off by degrees, and the walk must be lengthened in proportion to his returning strength: as soon as he has acquired sufficient for the purpose, a carriage will afford him exercise of another kind, attended with somewhat less pain and trouble; and riding on horseback will be of singular use, as soon as he is able to endure that kind of motion; but his ability to bear a carriage or riding, must not prevail on him to give up his rubbing and walking; the variety of exercise taken at different parts of the day will keep the body in a perpetual perspiration, and promote the circulation of the fluids through it's finest and most minute parts.

But this part of the regimen must in no case be carried such lengths as to produce considerable fatigue, or at least not in so great a degree as to bring on any indisposition, which will exist beyond the duration of the weariness which occasions it; nor should the patient by any means expose himself to sharp or damp air, or to the chilling dews of the evening.

Meantime regulations must take place with respect to the patient's food and liquors; the former should be of that kind which is light and most easily digested, beginning with the mildest kinds first, and advancing to others more heavy and of firmer texture, as he feels his strength, appetite, and digestive powers return; always

observing, not to overload the stomach by any considerable quantity at a meal, or to repeat the use of any food which has once turned sour, bitter or rancid, or remained on the stomach undigested.

The patient will begin his animal diet with dinners of calves feet, chicken, rabbits, partridges, whittings, soles, turbot, lobsters, crabs, cockles, and in particular oysters, which should be eaten raw without vinegar or pepper; and proceed by degrees to veal, lamb, pork, mutton, beef, and every other kind of animal flesh, but none of these should be eaten newly killed, nor with the addition of any other sauce than their own gravy, which should never be extracted by over-dressing.

Nor need he refrain from moderate quantities of the luxuries of the table; he may be indulged with pies, puddings, custards, creams, jellies, and every ripe fruit of the season, but none of the former should be taken after a plentiful meal, but as constituting a part of it: in the former case they are far from being prejudicial; in the latter, they may be properly considered as excesses, and will in general be followed by the usual consequences of this species of intemperance.

Vegetables of most kinds are peculiarly wholesome, but they should only be boiled in water, and not stewed with gravy or spices; and lettuce, endive, celeriac, and other salad herbs, may be eaten raw, with oil and a very moderate quantity of vinegar.

In the choice and quantity of liquors, great caution is necessary; those who have been accustomed to drink plentifully of wines, will find this the best time to break through a habit which, in order to the preservation of health, must be in a great measure relinquished: if the directions we have given have been observed during the continuance of the fit, the patient will have been somewhat weaned from the free use of wine by the time he begins to recover; let him seize the favourable opportunity, and forbear,

forbear to renew a practice which is wholly inconsistent with his views of health; if, instead of daily draughts of wine, he dilutes it with water, or which is still better, if he exchanges this liquor for mild, fine, and well-concocted ale or porter, he will find the recovery of his health rather accelerated than impeded by the alteration, and he will enjoy the pleasing reflection, that he is preparing his constitution to resist future attacks of the disease.

Attending strictly to this regimen, little physic will be necessary; though a few doses of rhubarb and magnesia, and infusions of any of the bitter herbs, taken at the changes of the seasons, may not be altogether improper.

If, after persisting in this course, the patient should have any return of the gout, he will find the fit shorter and less severe, and the effects of it less painful and injurious; there is little reason to apprehend it will visit him a second time, but if it should, the impressions of it will be still weaker and more faint.

Having fairly routed the disease, and repaired the health, strength, and vigour of the constitution, some relaxation even from this regimen, indulgent as it is, may be admitted, and the patient may be permitted to consider himself as only under the necessity of guarding against the approach of a disorder to which he may be again liable; for which purpose he may recur to the former part of this chapter, and observe the rules he will find there concerning exercise, diet, and equanimity of temper and disposition.

And now we appeal to the judgment and sense of our readers, whether the course of life and regimen which we have prescribed, is not in all respects easy, pleasant, and comfortable; and whether there be the smallest degree of hardship or difficulty in complying with every rule which this system contains, the whole of which is comprised in this single position, *that an effectual cure*

for the gout may be obtained by exercise, moderation in diet, and the exertion of those faculties with which God hath endowed us in restraining and governing our passions.

After having dwelt so long on this prevalent disease, it may perhaps be expected that we should take some notice of certain popular medicines, which have at different times, and by different persons, been esteemed infallible remedies for the gout; the principal of which are, the Duke of Portland's, and Lé Fevre's powder: of the latter, little more is known, than that no proof has been made of any cures effected by them, and that some of those who tried them were of opinion, that they rather tended to increase than to remove the disorder; whether this was the effect of the medicine itself, or occasioned by the imprudence and mismanagement of those to whom they were administered, it is not in our power to determine; but we are of opinion, that whoever has relied on this, or any other medicine, for the cure of the gout, and the prevention of its future attacks, taking the liberty to live as usual, and to indulge every appetite and passion without controul, has placed confidence in what never did, and (as we apprehend we have sufficiently shewn) never can happen.

The following is the composition of the Duke of Portland's powder for the gout or rheumatism.

Take the dry leaves of round birth-wort and gentian, the tops and leaves of small germander, lesser centaury, and ground pine, of each equal parts—powder them all together.

Of this powder, a dram is directed to be taken in any convenient liquid, every morning fasting for three months—during the next three months, two scruples, in like manner every morning—after that, half a dram each day for the succeeding six months—and during the whole of the second year, half a dram every other day.

Under

Under this tedious process many cures are said to have been performed by these powders; but the credit of them hath been lately considerably lessened, an opinion prevailing, which seems to be well founded, that if they operate at all to prevent this disease, it is by exciting and keeping up such a degree of fever as to prevent the gout from fixing on any particular part, and not by expelling or carrying off the gouty matter; in which case, instead of being a remedy for this disorder, they only serve to constitute another.

Various directions and prescriptions are to be found in different authors for *gout in the head, lungs, and stomach*, and for that state of the disorder which has been denominated a *wandering gout*; as also for *gouty colic* or *gout in the intestines*, *gouty diarrhœa*, *gouty asthma*, and a great variety of other disorders, which are supposed to be occasioned by gouty matter, or to arise from habits of body disposed to this disease: and we shall subjoin a few of the prescriptions which are adapted to some of these particular cases; though we beg leave to observe, that they should be applied with caution and diffidence, because it is not easy to ascertain that these complaints are of a gouty nature; and because, if that should really be the case, they will in general give way to the treatment, regimen, and medicine, which we have directed in regular fits of the gout.

For the *gout in the stomach*, attended with heat, difficulty of breathing, oppression of the stomach, belching, nausea, and sickness, a gentle vomit is advised; after it's operation a laxative clyster, and a moderate dose of Venice treacle.

If the sickness continues and is attended with considerable discharges of vomiting, give from eight to ten drops of liquid laudanum in a glass of cinnamon or mint water; after which the following powder is directed, to hasten the disease into the extremities.

Take of filings of iron, from five grains to ten—of Virginian snake-root powdered, one scruple. Make a powder.

Or, infuse two ounces of garlic root, bruised or sliced, in a pint of French brandy for two or three days. Of this give two or three spoonfuls, once, twice, or thrice a day, according to circumstances; adding to each dose, from ten to fifteen drops of the tincture of the flowers of iron.

The following draught hath also been recommended in this case.

Take of simple common mint water, one ounce and half—of the lesser cardamom seeds, two drams—of Virginian snake-root powdered, six grains—of the cordial confection, one scruple—of salt of hartshorn, six grains—of syrup of saffron, one dram. Make a draught, to be taken every fourth or sixth hour.

Or, take of Virginian snake-root powdered, half a scruple—of the cordial confection, one scruple. Make a bolus, taking after it two spoonfuls of the following mixture.

Take of simple peppermint water, three ounces—of the cordial confection, one dram—of tincture of snake-root, three drams—of salt of hartshorn, half a scruple—of balsamic syrup, three drams.

If the gout is apprehended to have fallen on the *lungs*, and to have occasioned an inflammation, attempts are directed to be made by such medicines as promote perspiration, and by external applications, to bring the gout into the extremities; treating the disorder in other respects wholly as a peripneumony.

When the gout is supposed to have seized the *head*, it hath been usual to cup and blister the arms, legs, and ancles; to bathe the feet in some spirituous fomentation, adding to it common salt and flour of mustard; and to give a pretty large dose of the *tinctura sacra*, or sacred tincture.

If the *colic* is conceived to proceed from gouty matter falling on the intestines, magnesia is advised to be given frequently, in case acids prevail in the first passages; but if bilious symptoms appear, bitter laxative infusions are prescribed, and afterwards the chalybeats, recommended for removing the gout from the stomach, are also directed to be used in this case.

When *asthmatic symptoms* are believed to be occasioned by gout, gum ammoniac is given as a remedy for those which denote a tendency to the dry asthma; and diuretics, perpetual blisters, and other drains, are said to be efficacious in the moist asthma arising from the same cause.

But, after all, we are of opinion, that medicines of all kinds, and especially warm

ones, are in most cases better omitted; and have rather offered these prescriptions and directions in respect to the judgment of others, than because we approve of them ourselves: laxatives are at most times useful, in many cases absolutely necessary; but if the body is kept open, and perspiration excited by proper warmth and diluting liquors, other remedies may be dispensed with, without incurring any risque of dangerous consequences from any turn the disorder may take: unless the constitution be miserably broken, the gout seldom quits the extremities, and when that is the case, heating and stimulating medicines will be more apt to aggravate disagreeable symptoms, than to bring relief.

C H A P. VIII.

Of the Rheumatism.

THE *rheumatism* is a painful disease, affecting the intermediate spaces between the joints and muscles in different parts of the body. It is of two kinds, distinguished by the appellations of *acute* and *chronic rheumatism*: the former is attended with a fever, the latter is unaccompanied by inflammatory symptoms.

The rheumatism prevails most in spring and autumn, and attacks persons of all ages and constitutions; but those are most subject to it, who are exposed to wet, cold, and the vicissitudes of weather, and who are ill clothed, coarsely fed, and reside in a low, damp, or moist situation.

The principal cause of this disorder is an irritating acrimony in the juices, which may be the effect of chronic diseases viciating the humours, or may be occasioned by the circumstances abovementioned; by ob-

structed perspiration; sudden and violent changes from heat to cold; excessive use of spirituous liquors; wet feet; damp beds, rooms, and houses; by suppression or excessive discharges of customary evacuations; or by whatever may conduce to the production of an inflammation in the part affected.

The symptoms of the *acute* or *inflammatory rheumatism* are a fever, and pains in the limbs, generally in the joints, preventing their motion, and accompanied with heat, redness, and a swelling of the part: when the pain is fixed, the fever commonly abates, though in some cases it continues several days, during which it is always most violent towards the approach of night. After the pain has affected one part for a few days, it frequently quits that, and attacks another; and the feet, ankles, knees, hips,

hips, loins, nape of the neck, shoulder-blades, shoulders, arms, elbows, and wrists, are at different times the seats of the pain; but the parts in which it is most severely felt are the neck, loins and hips: these pains also occasion such a tenderness, that the least motion or touch is productive of the most acute sensations.

The violence of the acute or inflammatory rheumatism, does not often continue above twelve or fourteen days, but the weakness and swelling will remain much longer, even months, if the winter approaches, before the disorder itself goes off: in some cases, after the pains are abated, a lassitude or general restlessness succeeds, which is relieved by the appearance of some sort of eruption on the skin.

In the *chronic rheumatism* the pains are confined to a few parts of the body, as the shoulders, back, or loins; but they are of longer continuance, and seldom occasion any visible alteration in the parts affected, though they are sometimes hot, and apparently inflamed, as in the acute kind.

Whilst the seat of the pain is in the external parts, the danger is not great; it is still less when the extremities only are affected by it; but if it is seated on any of the internal organs, fatal consequences may be dreaded: when the rheumatism attacks the brain, it occasions delirium; if the lungs are affected, a suffocation follows; and should it seize the bowels or stomach, dangerous inflammations of those parts may be apprehended. It has been remarked, that wherever a rheumatism is seated, that part never sweats, but that as soon as a perspiration can be excited in it, the disorder begins to abate; and when in either the acute or chronic rheumatism the decrease of pain is accompanied with free and general perspiration, and the urine flows copiously, and appears foul or disturbed, a speedy cure may be generally expected.

When the pain continues a very considerable length of time in one joint, the motion

of it may be so impaired as not to recover during life; and fixed wry necks have been sometimes ascribed to tedious and repeated rheumatic pains in that part.

In both kinds of rheumatism a low and cooling diet is necessary; spoon-meats, such as sago, milk, and thin broths, with fruits of all kinds, will be the proper food; and of all liquors, whey is the most salutary in this disorder: it may be made with wine or cyder, or in severe pains, of mustard or cream of tartar, which latter hath been highly recommended; if the whey should tire or disagree with the stomach, decoctions of tamarinds, and infusions or tea of the emollient herbs, may be substituted; imperial water is also an agreeable and wholesome composition for common drink, and is made as follows.

Take a dram of cream of tartar, and a small piece of fresh lemon-peel; pour on them a quart of boiling water. Stir the whole well together, and let it stand till it is cold; it may be sweetened with sugar to the patient's palate.

If the patient be young and vigorous, or of a full and sanguine habit, bleeding will be absolutely necessary; but it should be performed cautiously, and only when the feverish symptoms run high, and when wandering pains shift suddenly from the limbs to the internal parts, oppressing the breath, and affecting one or both sides; in this case it may be necessary to repeat this operation, if the symptoms do not give way; but we should be as sparing as possible in drawing blood, as very free discharges in this way frequently lay a foundation for chronic rheumatism.

After bleeding, laxative clysters may be given; and if any uneasiness approaches the head, they should be repeated night and morning; the body may also be kept open by fenna, tamarinds, or any other cooling and gently operating medicine.

In the inflammatory rheumatism nitre is peculiarly

peculiarly useful, and where the patient is strong and robust, may be given in almost any quantities the stomach will bear, dissolved in his common drinks; but where the stomach rejects it in this way, the following draught may be administered.

Take of the camphorated julep, one ounce and half—of the spirituous alexiterial water, two drams—of salt of hartshorn, eight grains—of pure nitre, one scruple—of simple syrup, enough to make a draught. To be taken every fourth hour.

And in this form nitre is given to advantage in the decline of the inflammatory rheumatism, and in every stage of the acute.

Opiates have been recommended when the pains have been violent, but they ought not to be admitted till the evacuations of bleeding and purging have taken place; and whenever administered, should only be given in quantities sufficient to moderate the pain, and not to occasion sleepiness. Perhaps half a scruple of the saponaceous pill, taken at bed time when the pain is generally most troublesome, may answer this purpose.

Baths of pure soft water, heated so as to produce an agreeable sensation in the skin, may after the evacuations afford ease; the patient should be placed in the water, and kept there half an hour, or longer, as circumstances direct; or, if this should not be practicable, flannels wrung out of it may be applied repeatedly to the parts affected: in both cases great care is necessary to avoid taking cold, the skin should be rubbed perfectly dry, and the body covered with blankets, to excite, if possible, immediate perspiration; indeed, it will be right that the patient should remain in bed, and endeavour to promote this evacuation, not only during the continuance of the fever, but even some time after the inflammatory symptoms have disappeared.

In addition to whey, and the other diluting liquors which we have already pre-

scribed, and to any of which a small quantity of Mindinerus's spirit may be added, the decoction of the Seneka root is recommended, in such quantities as may procure a sweat.

Gum guaiacum is also advised, either in substance to the quantity of half a dram, with a dram of the cream of tartar, in a tea-cupful of whey, or the volatile tincture of guaiacum in the following form.

Take of pure water, one ounce and half—of the spirituous alexiterial water, two drams—of the volatile tincture of gum guaiacum, thirty drops—of the paregoric elixir, forty drops—of syrup of saffron, one dram. Make a draught, to be taken at going to rest.

Or, take of gum guaiacum dissolved with yolk of egg, one scruple—of common water, one ounce—of Mindinerus's spirit, three drams—of the spirituous alexiterial water, two drams—of syrup of marsh mallows, one dram. Make a draught, to be taken as above.

Such antimonial preparations as pass off by perspiration are also efficacious in this disease: the following draught may be given occasionally, at proper intervals, between the doses of other medicines.

Take of pure water, one ounce and half—of the antimonial wine, fifty drops—of liquid laudanum, twenty drops—spirituous alexiterial water, and syrup of saffron, of each one dram.

Or this bolus.

Take gum guaiacum, and cinnabar of antimony, of each fifteen grains—of Venice treacle, half a dram—of syrup of marsh mallows, enough to make a bolus. To be taken once, twice, or thrice a day, drinking after it three or four spoonfuls of the following julep.

Take of simple alexiterial water, three ounces—of nutmeg water, one ounce—of sweet spirit

spirit of nitre, two drams—of syrup of marsh mallows, half an ounce. Make a julep.

Or the bolus may be succeeded by a draught.

Take of the camphorated julep, one ounce and half—of the spirituous alexiterial water, two drams—volatile tincture of gum guaiacum, and syrup of saffron, of each one dram. Add, if occasion requires, one dram of the paregoric elixir.

Blisters are frequently ordered to be placed on the part affected, though some are of opinion that bleeding it with leeches, or cupping, is more immediately efficacious; but in the acute rheumatism, both methods should be tried before the swelling comes on: in the chronic rheumatism, however, they are in general more serviceable, and may be used at any stage of the disorder.

External applications are sometimes successful, such as chafing the part with the volatile or saponaceous liniment, or applying plasters, which some advise to be only of Burgundy pitch, and others of the following composition.

Take of rye meal or flour, one pound and half—of stale yeast, seven ounces—of common salt, two ounces—of warm water, enough to make a cataplasm. To be applied to the part affected.

Rubbing the part with tincture of cantharides, of double and even treble strength, is said to have in some instances succeeded, when other applications have failed.

In chronical rheumatisms mild mercurials, in moderate doses, have been also administered with good effect.

Take of camphire, and nitre, of each ten grains—of opium, two grains—emetic tartar, and calomel, of each one grain. Let the whole be well beaten together, and make a bolus with common syrup.

In both kinds of rheumatism the bark is a remedy greatly to be depended on; but in the inflammatory state of this disorder, this medicine should not be given till it appears to intermit, or at least till plentiful sweats are brought on, and a copious sediment is observable in the urine: when the disease is chronical, and the patient free from feverish symptoms, it may be administered at all times with safety.

The bark may either be taken in doses, from half a dram to a dram in substance, or in such of the following forms as seem most suitable to the particular case.

Take of the extract of Peruvian bark, two drams—of gum guaiacum powdered, one dram—of the diuretic salt, half a dram—of balsam of guaiacum, enough to make the ingredients into forty-four pills; of which four may be taken thrice a day with three or four spoonfuls of the following julep.

Take of the camphorated julep, three ounces—of simple alexiterial water, one ounce. Mix.

Or, take of the decoction of Peruvian bark, two ounces—tincture of bark, and syrup of orange-peel, of each one dram and half—of the extract of bark, half a dram. Mix, and make a draught, to be taken every third or fourth hour.

Or, take of the decoction of Peruvian bark, one ounce and half—the volatile tincture of gum guaiacum, and syrup of saffron, of each one dram—of gum guaiacum dissolved with yolk of egg, one scruple. Make a draught, to be taken every six hours.

In the chronic rheumatism, immediate relief is not to be expected from medicine; a milk diet, exercise, bathing, especially in the sea, and the waters of Bath and Harrowgate, may contribute to the cure; to which should be added, a dry and warm air, a flannel shirt next the skin, and a seton or other drain.

But the pains may be alleviated by proper

per remedies, and a sweat generally procures present, though not always lasting ease; we shall therefore subjoin such prescriptions and common applications as have been found useful in the different stages and situations of this disorder.

A sweating bolus.

Take of powdered ipecacuanha, three grains—of nitre, half a scruple—of theriaca Andromachi, one scruple—of opium, one grain—simple syrup, enough to make a bolus. To be taken at going to bed.

Or, take of the kermes mineral, three grains—of camphire, four grains—of conserve of hips, half a scruple—simple syrup, enough to make a bolus. To be taken as before. In case the conserve of hips should purge, omit it, and add the like quantity of Damocrates's confection.

An alterative decoction.

Take sarsaparilla root, and ginseng root sliced, of each half an ounce—of China root, one ounce. Boil the whole together in two quarts of water till it is reduced to one, and take from six to eight ounces moderately warm after either of the last mentioned boluses, and again in the morning if it should be necessary to promote perspiration.

An antimonial electuary.

Take of conserve of oranges, one ounce—of levigated cinnabar of antimony, half a dram—of gum guaiacum, three drams—of the *cannella alba* powdered, one dram—of syrup of oranges, enough to make an electuary, which may be taken to the quantity of a nutmeg night and morning.

A guaiacum bolus.

Take gum guaiacum, and cinnabar of antimony, of each fifteen grains—of Damocrates's confection, half a dram—of syrup of marsh mallows, enough to make a bolus. To be taken twice or thrice a day, drinking after it three or four spoonfuls of the following julep.

Take of simple alexiterial water, six ounces—of nutmeg water, two ounces—of sweet spirit of nitre, two drams—of syrup of marsh mallows, half an ounce. Make a julep.

Or the following draught may be substituted for the julep.

Take of the camphorated julep, one ounce and half—of the spirituous alexiterial water, two drams—the volatile tincture of guaiacum, and syrup of saffron, of each one dram. Make a draught, and add, if the patient is in great pain, one dram of the paregoric elixir.

The following remedies are calculated for such as are not within the immediate reach of medicine.

Mix flour of brimstone and honey in equal quantities. Take three tea-spoonfuls at night and two the next morning, and one tea-spoonful on each succeeding night and morning, till the cure is completed.

Take a tea-spoonful of white mustard-seed twice a day, in a glass of white wine or wine and water.

Take the leaves and stalks of water-trefoil and ground-ivy, of each a handful—of camomile flowers, an ounce; pour on these herbs two quarts of boiling water, let it stand till cold. Pour off fine, and drink half a pint twice a day.

Bruise or slice half a dozen cloves of garlick, and infuse them twelve hours in half a pint of small white wine. Pour it off fine, and drink it going to bed. It frequently brings on a sweat, and procures ease.

Let the patient confine himself to a diet of new milk whey, and bread, for a fortnight.

But, after all, we are inclined to believe, that Dr. James's powder, though not yet universally admitted into the prescriptions of regular physicians, is the most safe, efficacious,

ficacious, and certain remedy, which has ever been offered for this disease; the mode of administering which, and proper directions for management, will be given when we treat of that and other popular medicines of the same class.

There are also other kinds of rheumatic pains, which are distinguished by the names of *lumbago* and *sciatica*.

The former is a pain in the small of the back, which continues fixed in one particular part, and is most troublesome upon any motion of the body; such as sitting up in the bed, rising from a chair, or the like.

The *sciatica* is a pain in the hip, which is also fixed to that part, producing lameness and incapability of moving the leg and thigh; and both these pains are unaccompanied with fever, and are tedious in the removal.

The treatment and cure of both these species of rheumatism, must be very nearly the same as we have directed in the former part of this chapter for the chronic kind of this disorder; but issues and other drains are more particularly recommended when the pains are in the hip, and should be placed as near as convenient to the part affected.

Volatiles, internally administered, such as the ethereal oil of turpentine, given to the quantity of twenty or thirty drops, according to circumstances, in a tea-cupful of the decoction of guaiacum wood, are often of great use, particularly if the part is also rubbed externally with the volatile liniment, or opodeldoc.

The following plaster is also advised.

Take of Burgundy pitch, six parts—of *euphorbium*, one part—of Venice treacle, one part. Mix, and spread a plaster large enough to cover the part affected.

The following electuary may be of use in these fixed pains.

Take of lenitive electuary, one ounce and half—of *Æthiop's mineral*, half an ounce—

of gum guaiacum powdered, two drams—of oil of juniper, four drops—of syrup of marsh mallows, enough to make an electuary; of which the quantity of a nutmeg may be taken twice a day, drinking after it a wine glassful of a decoction of *sarsaparilla*.

The *balsam of guaiacum*, taken to the quantity of a dram once or twice a day, according to the violence of the complaint, hath been serviceable; as have also the balsam of capivi, and the Canadian balsam.

The following is the composition of the balsam of guaiacum.

Take of gum guaiacum, half a pound—of the balsam of Peru, one dram and half—of rectified spirit of wine, three fourth parts of a pint. Mix the whole well together.

Mustard whey is also peculiarly serviceable in old fixed pains in the small of the back and hip; and some recommend rubbing the part affected with the dry flour of mustard till an inflammation is produced, though others think the flour should be mixed with warm water, and applied as soon as it affects the nostrils powerfully.

The following are given as family specifics for the *sciatica* or rheumatism in the hip.

Rub the part affected with that kind of rum which is called Barbadoes spirit. It should be done with a warm hand before the fire.

Bathe in cold water, and rub the part well with a flesh brush.

Pound equal quantities of the roots of burdock and elecampane together, and make a poultice, applying it cold to the part. This is apt to occasion a present increase of pain, but is said to remove it in twenty-four hours.

Boil nettles in a small quantity of water. Foment with the liquor, and apply the herb as a poultice.

C H A P. IX.

Of Cancers.

A *Scirrhus* and *cancer* are generally mentioned as synonymous terms; but very eminent writers distinguish these terms, and say, that if the stagnating matter of a *scirrhus* is put in motion so as to inflame the vessels situated in it's margin, it becomes from thence malignant, and is then denominated a *cancer*.

A *cancer* is an unequal tumor with or without an ulcer; when it is unburst, it is said to be an *occult cancer*; and when the skin is broken, and a thin, acrid, and fœtid matter is discharged from the sore or wound, it is called an *open* or *ulcerated cancer*.

This disorder may be seated in any part of the body, but more commonly affects the glands; men are most subject to the attacks of it in the mouth, tongue, or arm-pits, and women in the breasts or womb.

This disorder is generally occasioned by obstructed excretions or evacuations; hence single women, and in particular those whose periodical discharges have ceased, are peculiarly liable to it; as well as those women who have borne children but have not suckled them: women who have borne and suckled many children, are seldom afflicted by it; and men are still less often troubled with it.

When a *scirrhus* is once formed, whatever causes an increased motion of the humours, occasions inflammation, and brings on pain and heat; and the *scirrhus*, which hitherto was inactive, acquires an acrimony, by which the containing parts are irritated and corroded; and thus the passions of the mind, and particularly those of grief or anger, may easily convert a *scirrhus* into a *cancer*.

This disorder may likewise arise from external injuries, such as blows, bruises, constant leaning against a desk or table in a particular posture, or from too great compression of the part, which frequently occasions it in women who accustom themselves to draw their stays too strait; it hath been also said that it may proceed from improper food, from inactivity or a sedentary life, and it hath been supposed to be in some cases the effect of an hereditary taint.

As we have already observed, this disease is in it's first state a *scirrhus* tumor, and may be deemed a *cancer* as soon as it becomes painful; that is, as soon as the matter contained in the tumor is set in motion; till that happens it is not easy to determine whether the disorder is or is not of a cancerous nature.

In the first state it often continues years without being troublesome, and in some instances without increasing in size, which perhaps may not exceed that of a hazel nut; but when an itching is perceived in it, followed by a pricking or shooting pain, and the colour of the skin begins to change, no difficulty remains as to the nature of the complaint.

It is in this stage of the disorder that the distension of the veins around the tumor take the fancied appearance of crabs claws, and from this circumstance the disorder obtains it's name; though this state of the surrounding vessels hath been described by some as the tumors beginning to extend itself, by pushing out a kind of roots or limbs.

Thus formed, the cancer is an irregular, knotty tumor, of a dusky, purple, or livid hue, attended with a peculiar kind of burning, piercing pain; and, when advanced

vanced so far, sometimes, and especially in women's breasts, increases speedily to a very great size, as more of the glands become obstructed; though in other cases the progress is slow, and the pains less violent, with such frequent intervals of ease as to give the patient flattering hopes that no farther inconvenience will arise.

A cancerous tumor never suppurates like an inflammatory one, because the obstruction is in the minute lymphatic vessels; but when it is ready to burst, particularly in the breast, it generally grows prominent, and gathers to a point; and this change is accompanied with an augmentation of the burning sharp pains commonly felt before, which also seem nearer the surface of the part affected. In this state a corrosive ichor, or thin humour, oozes through the skin in the prominent part of the tumor, or the same kind of acrid fluid, tinged with blood, is found upon the surface of it; and in either case an ulcer is soon formed, the discharge from which continues to be thin, corroding, and extremely offensive to the smell; the lips of the ulcer turn out, are of a dark and disagreeable hue, and frequently bleed; and the pains become more acute, pungent, and excruciating.

In this aggravated state of the disease, the patient suffers almost equally from the pain and the foetid stench of the ulcer; the whole habit of body is vitiated; the appetite fails; a hectic fever, accompanied with profuse night sweats, wears the body down; and the unhappy victim of this loathsome complaint, either sinks gradually under the complicated misery, or is carried off by a violent hæmorrhage, from the ulcer itself, or from some other part of the body.

The diet should be cool, moist, and light, consisting chiefly of spoon-meats, broths, vegetables, fruits, and white meats; every thing salted, highly seasoned, and hard of digestion, should be carefully avoided; the drinks such as are least fermented or heating: the patient's mind should be

kept as tranquil as possible; and though some exercise is serviceable, yet it should never be taken to such a degree, as either to put the body in any violent motion, or to occasion fatigue. A well-dressed hare's or rabbit's skin should be constantly worn over the part, as well for warmth, as to defend it from accidental blows, pressures, or other external injuries.

On the first appearance of scirrhus tumors, the patient should immediately alter his manner of living, and confine himself to the regimen we have already directed; he should lose blood, according to habit of body and other circumstances of constitution, and enter on some such course of alterative medicines as follows.

Take of manna, one ounce—water, two ounces—nutmeg water, three drams—Rochelle salts, three drams. Make a potion, to be taken in the morning, and repeated twice a week.

On the days when the purging potion is not administered, the patient is advised to take a tea-spoonful of millepedes, or woodlice, either living, or dried and reduced to powder, morning and evening, with three or four spoonfuls of the following julep.

Take of water, three ounces—simple cinnamon water, and nutmeg water, of each one ounce—of pure nitre, one dram—of salt of hartshorn, half a dram—of balsamic syrup, two drams. Shake the whole well together.

Or the following.

Take of Venetian soap, twelve grains—the vitriolic tartar, and rhubarb in powder, of each six grains—of oil of carraways, one drop—of balsamic syrup, enough to make a bolus. To be taken at bed-time, with two spoonfuls of the following julep.

Take of water, six ounces—of the styptic tincture, one ounce and half—of simple syrup, two drams. Mix. This bolus and
4 N julep

julep may be taken once, twice, or thrice a week, according to circumstances.

Instead of the above medicines, some recommend the common purging mercurial pills to be given twice or thrice a week, and the part to be very gently rubbed with the mercurial ointment, and kept warm; and in this case it will be proper that the patient should drink half a pint of the decoction of the woods twice a day.

Or the pill may contain from one grain to three of calomel, and an equal quantity of powdered rhubarb, which may be made into the form of a pill with Castile soap or crumb of bread.

The following is the preparation of the mercurial ointment.

Take of quicksilver, one ounce—of hog's lard, one ounce and half—of mutton suet, half an ounce. Rub the quicksilver in a warm mortar with half the hog's lard, till the globules are perfectly extinguished; then add the remainder of the lard and suet, which should in the mean time be melted together. Let the whole be perfectly well mixed by rubbing.

The following external application to the ulcer is recommended.

Take the compound powder of cerussic, and gum Arabic, of each two drams—of sugar of lead, one scruple. Rub these well together in a marble mortar, and add by degrees three ounces of lime-water, and three ounces of rose-water, mixed. Make a lotion.

Cleanse the ulcer tenderly, then wash it with this lotion somewhat warm, and cover it with dry lint, or lint dipped in the same lotion; over the whole lay a plaster of the following cerate.

Take of sugar of lead finely powdered, one dram and half—of olive oil, a jill—of white wax, two ounces. Rub the sugar of lead well with one half the oil, and then add

the mixture to the remainder of the oil and the white wax, melted together, and continue to stir the whole well till it is cold.

As an external application, the solanum, or nightshade, is said to be useful; the leaves of this plant may be beat to a poultice, or mixed with white bread and milk, and applied to the cancerous tumors: the deadly nightshade, or the garden nightshade, may be used indifferently for this purpose.

But an eminent physician of another country hath introduced a different herb, and recommended it as almost a specific in cancerous cases; and though it's efficacy may not be so very certain as he seems to apprehend, yet proofs are not wanting of it's having produced very good effects in a variety of instances.

This remedy is *hemlock*, a plant almost universally known, though it's peculiar virtue in the cure of this particular disease seems to be rather a modern discovery.

This herb may be administered, either in powder of the dried leaves, or in an extract, which may be made by expressing the juice, and thickening it to a consistence fit to form into pills with the powder of the dried leaves: the patient is to begin with small doses of a grain or two, increasing the quantity gradually as long as it can be taken without immediate injury, or until it produces favourable effects; in the former of which cases it will be necessary to lessen the quantity till no ill consequence is visible; and in the latter to fix the doses to that quantity which hath apparently effected a change in the appearance of the disease. With some constitutions the quantities taken will be very considerable, even to the amount of two or three drams a day; with others much less will be sufficient to occasion the following marks of indisposition: a giddiness of the head, a motion in the eyes, as if they were thrust outward by some internal force, a slight sickness at
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the stomach, a trembling or agitation of the body, and a loose stool or two in the morning after the dose; any one of these symptoms is sufficient evidence that the doses are large enough; but unless the symptoms are violently troublesome, the same quantity should be continued till it produces no disagreeable effect, which will happen in a few days; even small doses offend some habits, occasioning heat, thirst, and twitchings, and in such instances the use of it must be discontinued.

The dried herb may also be used in the form of tea, or small quantities of it given in broth frequently; and the internal use of it may be assisted very considerably by bathing the body in warm water wherein this herb hath been infused, by applying decoctions of it as fomentations, or the herb itself in poultices, to the parts affected: a tincture of hemlock may also be extracted by rectified spirits of wine, which may agree where the herb in substance cannot be taken.

A particular regimen is directed with the use of this herb; the patient is required to abstain from all preparations of flour which are not well fermented, and from such spices and aromatics as are highly pungent and acrid; but he is indulged in the use of a moderate quantity of acids, and good wine if he hath been accustomed to it; he is also advised to reside in an open and pure air, and to avoid as much as possible whatever disturbs or affects his mind.

But the best effects of this medicine are not pretended to be speedily produced; a perseverance in the use of it for two, and even three years, may be sometimes necessary: nor will it be thought a hardship to continue it much longer, if it should but have stopped the progress of so dreadful a complaint, the increasing violence of which threatens nothing less than an inevitable and miserable death.

The bark and mercury may also accom-

pany the use of the hemlock, and these several medicines may be given as follows.

The extract or powder of hemlock, in quantity from one grain to five, according to circumstances, twice a day.

The decoction of bark, from two to three ounces, three times a day; and

From one tenth of a grain to half a grain of white corrosive mercury twice a day. If the stomach is offended with the latter medicine, a few drops of liquid laudanum may be added to each dose.

The wounds should be kept perfectly clean, and for this purpose the water in which cabbage hath been boiled is recommended, or poultices of raw carrots grated may be applied twice a day, which will considerably lessen the offensive smell attending cancerous ulcers.

We have forborne to speak of extirpating these tumors, either by the knife, or by such applications as consume the diseased part, because they are both operations of surgery, and ought not to be attempted without proper assistance. It may not however be improper to mention Mr. Plunket's famous composition for the latter purpose.

Take of crow's foot, growing in low damp grounds, one handful—of dog fennel, three sprigs. Pound them well in a marble mortar; add to them of crude brimstone and white arsenic in fine powder, of each three moderate thimblefuls: mix the whole well together, and make it into balls about the size of a nutmeg, which must be dried in the sun; these balls being powdered and mixed with the yolk of egg, and then spread on a piece of hog's bladder, which has been previously smeared with the yolk of egg, may be laid on the cancerous part, to the size of half a crown or less, if the sore or wound is in the face or near the seat of the heart, but if in any other part of the body, to the size of the ulcer. This plaster

plaster must not be removed till it falls off of itself, which will happen in about a week, but in the mean time clean bandages should be applied daily.

The following more simple treatment and remedies may be serviceable, and especially in the early stages of this disease.

While the disorder is in the scirrhus state, let not the part by any means be handled, or pressed by the cloaths, but kept as easy as possible.

Keep the body open with cooling medicines, such as manna, Glauber's salts, or the like, or with this electuary.

Take of lenitive electuary, one ounce and half—magnesia, and flowers of brimstone, of each two drams—of rhubarb powdered, two scruples—of oil of carraways, two drops—of syrup of roses, sufficient to make an electuary; of which the quantity of a nutmeg may be taken morning and evening, whenever there is the least complaint of costiveness.

Avoid all spirituous and heating liquors, as well as medicinal cordials, and be peculiarly attentive not to excite any extraor-

dinary degree of heat, by violent exercise of body, or agitation of mind.

If any degree of fever should attend, bleeding will be necessary, and may be repeated, if the violence of the symptoms does not abate, or the pain is augmented with the fever.

When the tumor is yet in it's scirrhus state, any slight inflammation which appears in the neighbourhood of it, may be relieved, and probably prevented from degenerating into a cancer, by washing it frequently with Goulard's saturnine water.

The following are family prescriptions.

Take equal parts of red poppy water, plantane water, and rose water—add a proportionable quantity of honey of roses, and bathe the part frequently. After a time, the honey of roses may be omitted.

Rub the whole breast, if that is the seat of the tumor, with the volatile liniment, morning and evening.

Apply a poultice of wild parsnip, the flowers, leaves, and stalks, beat fine: change it morning and evening.

C H A P. X.

Of the Scurvy.

AS we propose to dedicate a part of the work before us to the diseases more immediately peculiar to soldiers and seamen; and as from circumstances which at times attend those engaged in both professions, there is no disorder to which these classes are so liable as the scurvy; we shall at present confine ourselves principally to that species of it which has been denominated the *land-scurvy*, reserving the description and cure of the *sea-*

scurvy, to which however those employed in military service on shore are also from the same causes subject, for a future chapter.

The scurvy is a chronical disorder of the putrid kind, and the immediate cause is the putrescent state of the blood.

Those are most subject to this disease who live in low, damp, and moist situations, and particularly near marshes which are overflowed by the sea or other waters; those

those who inhabit damp or low houses, paved with stone; and those who lead inactive or sedentary lives.

It may be occasioned by cold, moist, or confined air; by an improper diet of any kind, such as hard, dry, and salted, or crude, sour, and watery food; it may also arise from the suppression of any usual evacuation, from the repulsion of eruptions on the skin, from those passions of the mind which bring on hysteric and hypochondriac complaints and melancholy, from a long use of mercury or the Peruvian bark, from infection, and, as some conceive, from hereditary taints.

There is scarce any other disorder which assumes so many shapes and changes, and lurks under the disguise of so many different maladies; exhibiting such a variety of symptoms and complaints, as to deceive those who possess the greatest skill, and have examined it with the most deliberate caution.

Among the various symptoms which denote this disease, the following seem most certain; an unusual laziness, dulness, and disinclination to every kind of exercise; an universal lassitude or weariness, arising from no exertion or fatigue of body; a pain in the muscles, as if they had been overstrained or laboured, and particularly in those of the loins and thighs; the same sensation on first awaking after a night's sleep; and an inability to walk up or down hilly or uneven ground: these symptoms are succeeded by a short and laborious breathing; the legs and ancles swell, but the swelling sometimes disappears and returns again occasionally, the limbs in the mean time seeming heavy and indisposed to motion; the skin becomes covered with spots, at first red, and afterwards brown or livid; the countenance becomes pale, sallow, or of the colour of ashes; the mouth begins to emit a foetid smell; and the gums swell and grow painful, hot, and itching, bleeding upon every slight touch, and shrinking

from the teeth, which are left naked and uncovered, and frequently become loose, and though the gums are unusually red, or rather livid, yet they are soft, spongy, fungous, and putrid; wandering pains are felt in different parts of the body externally and internally, producing gripes, cholic, stitches in the side, pains in the breast and stomach, and even of the bladder, spleen, and liver; as the disease advances, the appearance of the gums becomes inflamed, bloody, and inclining to a gangrene, emitting a cadaverous and most offensive smell; the teeth rot, the veins under the tongue gather into knots, hæmorrhages burst through the skin without any apparent wound, and the blood, especially, flows from the lips, mouth, gums, nose, lungs, stomach, and intestines. In this stage of the disease, ulcers break forth of the most unpromising appearance, obstinate of cure, and inflexible to every application; these are principally seated in the legs, but spread every way, discharging a thin acrid matter, intolerably foetid; scurvy or scaly eruptions appear on the skin; the congealed part of the blood is black and clotted or curdled, but of a loose and flabby consistence; and the serum or whey-like part of it is salt and sharp, with a greenish matter floating on the surface: the pains now become more intense, and particularly in the night, gnawing, darting, and shooting through the limbs, joints, bones, and intestines; and the spots or blotches are purple, black, or blue.

In the last stages of this disorder, the patient is troubled with vomitings, purgings, fluxes, and dysenteries; sharp stranguries, or scalding pains, in discharging the urine; fainting fits on the least motion or change of air; anxieties and oppressions, which frequently prove suddenly fatal; trembling, contractions of the limbs, paralytic seizures, dropsies, convulsions; and the scene sometimes closes with discharges of blood by vomitings and stools, or by a mortification of the bowels.

The regimen in this disease must be adapted to the symptoms; for the most part broths of white meats, jellies, fruits of all kinds, preparations of milk and vegetables, and such like light and cooling food, with butter-milk, whey, hock or Rhenish wine, cyder, perry, and wort, or beer which has not been fermented, for drinks, will constitute a proper diet; spruce-beer may also be taken medicinally, as well as decoctions of sarsaparilla, marsh mallows, or the like, or infusions of the bitter herbs, such as ground-ivy, the lesser centaury, and marsh trefoil or buckbean.

Change of air is of great use; and where the patient's usual residence has been in a confined, low, or damp situation, is absolutely necessary: the change should be to one as free and open as possible, but it should be a southern or western exposure, sheltered from the rude blasts of north and north-east winds.

Exercise is essential, but it must be taken cautiously; fatigue of body or mind is injurious, and for this reason the patient's attention should be engaged in such amusements as may tend to excite cheerfulness and good humour; in this respect much depends on the friends and attendants of the sick, who should study to gratify even the whims of those whose intellects must be supposed to be in some measure affected by pains, weakness, and indisposition of body.

The principal medicine to be depended on is the bark, which may be given in substance to any quantity that the patient's stomach will bear; the elixir of vitriol may also be mixed with the patient's common drink: and these, with other anteputrefcents, and such other means as are used in the putrid fever, will be proper in this disorder.

When the patient is cold, pale-faced, and his legs swell, but is not troubled with thirst—

Take of the root of garden radish, four ounces—scurvy-grass, and marsh-trefoil, or

buckbean, of each two handfuls—of sage, one handful. Infuse two days in three quarts of white wine; then strain off, and let the patient take from four to six spoonfuls, three or four times a day.

If, on the contrary, he is feverish, hot, and thirsty, if his breathing is difficult, and his gums begin to grow putrid—

Take of the root of sharp-pointed dock, one ounce—of cream of tartar, three drams. Boil these half an hour in three pints of milk; strain it off, and sweeten to the palate with British honey. Let the patient take two or three ounces three times a day.

The *berba Britannica*, or great water-dock, hath been highly recommended for the cure of this disease; a decoction may be made by boiling a pound of the root in two quarts of water, till it is reduced a third part: of this a tea-cupful may be taken twice or thrice a day, increasing the frequency and quantity as the stomach will bear it; but if any good effect is expected from this medicine, it must be persisted in for a very considerable length of time. An extract from the root may perhaps be taken with less inconvenience than the decoction, and prove equally efficacious.

Particular symptoms of this disease may be relieved by the following management: when the gums become spongy, they may be washed with a decoction of the bark, acidulated with the spirit of sea-salt; when ulcers spread in the mouth, touch them now and then with the honey of roses, acidulated with the same spirit; if a salivation comes on, which may possibly be occasioned by the stricture of the skin, it must be diverted by blisters applied to different parts of the body, and by sinapisms or warm plasters to the soles of the feet and hams; in this case all methods must be tried to excite perspiration, and for this purpose boluses of camphire and theriaca may be repeated every three or four hours; and if the legs swell, gentle

gentle frictions will be useful. Ulcers in the legs may be treated like those in the mouth; and in case of hæmorrhages, the dulcified spirit of nitre, and other acids of the same class, may be given at intervals; and when a fever attends, the mineral acids, or Clutton's Febrifuge Spirit, may be added to such other medicines, as symptoms and circumstances may require.

But where the patient can have free recourse to vegetables and milk, it must be from neglecting to avail himself of these advantages that this disorder becomes extremely troublesome and dangerous; the variety of fruits and herbs, which are so plentifully distributed in all parts of Great Britain, offer ready and sovereign remedies for the cure of the scurvy.

Among the sallad herbs which may be deemed antiscorbutics, are cresses of all kinds, and particularly water-cresses, sorrel, endive, celery, lettuce, spinach, garden-radish, horse-radish, parsley, and purslain: all these may be eaten raw; but cabbage, carrots, cauliflowers, and a great variety of other vegetables, which are usually served at our tables, are also powerful remedies against this distemper.

Of the fruits of our own climate, apples, strawberries, raspberries, and currants, are to be preferred; where the gums are principally affected, the juice of lemons, or four oranges, will frequently relieve; and sweet or China oranges, eaten in conside-

rable quantities, are of excellent use in scorbutic habits.

The following simple remedies are also prescribed for this disease.

Take eight ounces of the inner bark of the elm, (from the small branches if in the spring of the year, and from the spreading roots in the autumn or winter.) Boil it in four quarts of water, till one quart is consumed. Of this decoction take one pint morning and evening.

Make a conserve of wood-sorrel, and take the quantity of a walnut three or four times a day.

Take three spoonfuls of the juice of nettles every morning.

Make a conserve of Seville oranges, beating pulp and rind together, and take it freely.

Confine the patient entirely to a milk and vegetable diet, and let his only drink be new whey.

The Bath and Harrowgate waters are also recommended for the land-scurvy: bathing in them and taking them internally, they are often productive of the happiest effects; and as the sea-scurvy is relieved by the land air, so the land-scurvy frequently receives considerable benefit from the air of the sea, and bathing in the sea water.

CHAP. XI.

Of the Itch.

THIS is a disease of the skin, and is caused by very small *animalculæ*, imperceptible without the assistance of a microscope, of a whitish colour, in shape like a tortoise, having each six feet and a sharp

head, armed with two small horns at the point, and covered over with so hard a shell, as in general to resist the force of rubbing or other pressure.

Though this disease is unquestionably com-

communicated by infection, yet cleanliness is a great antidote to it; nor does it often prevail among those who enjoy the benefits of clean cloaths and habitations, good air, and wholesome diet.

This disorder generally appears in the form of small watery pustules, at first about the wrists and between the fingers, afterwards on the arms, legs, and thighs, and particularly under the bendings; but it never affects the head. In the evening, when the patient approaches the fire, or begins to grow warm in his bed, the itching is intolerably troublesome; in some cases spots or blotches are distributed over the limbs and some other parts of the body, in others the skin is covered with a scurfy or scaly eruption; and under these latter appearances the disease is called the *dry itch*, and is more difficult of cure than when only the first mentioned symptoms occur, which state of the disorder is denominated the *moist itch*. Children are most liable to the moist itch, and grown persons to the dry.

In the moist kind, the humour which fills the pustules has the appearance of ripened matter, and the basis of each is inflamed; but in the dry kind, the pustules are of a smaller size, and filled with a thin acrid fluid, which, irritating the tender fibres under the external skin, occasions heat and itching.

In both kinds of itch, and from whatever cause the disorder proceeds, sulphur is to be depended on for a cure; and it should be used both internally and externally.

But, previous to the use and application of this medicine, if the patient is of a full habit, and the appearances of inflammation are considerable, it will be necessary that he should lose some blood, and at all events the body may be opened by some such gentle purge as the following.

Take of the common infusion of senna, two ounces—of tincture of senna, two drams—of soluble tartar, one dram—of syrup of

roses, one dram. Make a potion, to be taken in the morning early.

After bleeding and purging, the following ointment is directed.

Take of flour of brimstone, one ounce—of the root of white hellebore powdered, or of crude sal ammoniac in powder, two drams—of hog's lard, two ounces. Mix well together. A scruple or half a dram of essence of lemon may be added, to take off the disagreeable smell.

Of this ointment one fourth part is to be rubbed over the body at bed-time; but as it may prove injurious, and productive of other disorders, to stop too many pores at once, it is advised to rub only one fourth part of the body at once, with one fourth part of the above composition, and to proceed daily with the other three parts of the body and ointment. Some have been of opinion, that it is not necessary to apply this medicine to any other parts of the body, than the palms of the hands and the soles of the feet: but it is somewhat doubtful how far this method of unction would be effectual to remove the disorder; if it is equally efficacious, it is unquestionably the most agreeable method of applying the ointment, on account of the smell and uncleanness which attends the universal use of it; but both these inconveniencies may be in a great measure lessened by constant changes of clean and dry linen. That which is taken off should be immediately washed, to prevent infection.

During the use of the ointment, the flowers of sulphur should be taken internally, either alone or with cream of tartar, in milk or new whey, in such quantities as will keep the body gently open, producing a stool or two in the day.

Whilst the patient is under this course of medicine, it will be necessary for him to keep himself rather warmer than usual, and carefully to avoid taking cold; whatever

ever he eats or drinks should be warmed, and he should change no other part of his cloaths than his linen during the continuance of the disorder.

Mercurial girdles, and mercurial ointments, were formerly much used in this disease, but both are attended with danger; and as the disorder is effectually cured by the sulphur without risque, it is certainly to be preferred in all cases, notwithstanding the application of it may not be altogether so consistent with nicety or delicacy.

And mercurial applications are the more to be avoided, on account of the possibility of mistaking for the itch other eruptions on the skin, the stoppage of which may be attended with consequences of a very fatal nature.

Therefore, though, for the satisfaction of those who have particular objections to the sulphur, we have subjoined prescriptions for a mercurial lotion and ointment; yet we earnestly advise our readers to avoid the use of them, unless they are administered under the directions of skilful practitioners of physic; to depend for a cure on the safe, easy, and certain remedies, which we have pointed out, and rather to submit to a trifling, temporary inconvenience, than run the hazards which may be incurred by an injudicious and unnecessary use of mercurial medicines.

Take of white corrosive mercury, one dram—of common alum, two drams—of sal prunella, half an ounce—of simple lime-water, half a pint. Mix to a lotion.

Take of white corrosive mercury, ten grains
—of white precipitate of mercury, one dram
—of soft pomatum, one ounce and half.
Mix well to an ointment.

We cannot conclude this chapter without a caution to our readers, not only against the use of the last mentioned prescriptions, but even of the sulphur ointment, on every slight occasion of eruptions on the skin, which are very often, and especially in children, efforts of nature to relieve the habit from some approaching disorder, and should rather be encouraged than repelled; in all cases it is safe to let the disorder proceed till the nature of it can be ascertained with precision. The itch is seldom or ever dangerous, and no worse consequences than the delay will arise from waiting a few days before external applications are made.

As want of cleanliness is the principal, if not the only cause of this disorder; those who have the care of children at public schools, and of adults in workhouses, hospitals, and other public or charitable institutions, should be peculiarly attentive to this article: owing to neglect in this particular, it is no uncommon case for the itch to spread through whole schools; and as the promulgation of the circumstance would bring discredit on such seminaries, the disease is attempted to be stopped by mercurials and other injudicious applications, and by these means many tender constitutions are ruined, and foundations laid for disorders, which shew themselves at different times, and in various forms, in the future progress of life.

CHAP. XII.

Of Nervous Diseases.

THE symptoms attending *nervous complaints* are so extremely numerous and various, as to resemble at times almost every disorder to which the human frame is liable; nor do the same symptoms indicate similar complaints in different constitutions, or in the same constitutions at different times.

Those who labour under internal disorders, or have been accustomed to lead sedentary lives; those who are engaged in studious or literary pursuits; and those who have been subject to vicissitudes of fortune, and whose spirits have been much oppressed or agitated; are peculiarly subject to nervous complaints.

The causes may be a natural, weak, and irritable disposition of the nervous system: whatever tends to weaken and debilitate the body; such as indolence, excesses of all kinds, violent evacuations, indigestion, repletion, or too great abstinence; unwholesome food; weak, windy, and watery liquors; sweats occasioned by excessive labour, or violent exercise; large draughts of cold fluid taken under such circumstances; sudden changes of climate; and exposure to a cold, damp, or moist air.

But the operations of the mind are also in a very considerable degree contributory, if not to the creation, at least to the increase of the symptoms which attend these diseases; and, as we have before observed, the studious, and those who are engaged in such employments as require intense thought, and perpetual use of the mental faculties, are very apt to feel that depression or deprivation of spirits, which too often denotes the approach of nervous indisposition; and which is also augmented by the inactivity of body, and consequent in-

digestion, which a life of study naturally imposes.

Nor do these disorders unfrequently arise from the violence of the passions, either manifested in sudden bursts of grief, ebullitions of anger, or in the slow progressions of concealed sorrow or smothered resentment. Yet ought we not in all cases to consider the peevishness and apparent ill humour which is generally observable in those who are afflicted with nervous complaints, as the causes of these disorders; they are as often the consequences of them: for when the nerves are affected, the spirits suffer by sympathy, and bodily indisposition brings on those changes of temper, and that wayward and dissatisfied turn of mind, which are in these cases to be considered as mere symptoms of the disease.

Scarce any part of the human body is without nerves, and very few of the nerves are without feeling; the nerves therefore must not only suffer when they themselves, or the brain or spinal marrow from whence they all proceed, are primarily affected, but when any of the other parts of the body, through which they spread universally, are diseased; and from hence arises the extreme difficulty of fixing a certain criterion by which nervous disorders may in all cases be distinguished from those which are not held to be of this class, though in some instances this may be done with tolerable certainty.

Ingenuous physicians have asserted, that fevers make up two third parts of all the diseases to which mankind are liable, and nervous disorders one half of the remainder; the different denominations of these disorders arise from the different degrees of them,

them, which are manifested in an infinite variety of different symptoms and appearances, from yawning to madness.

The symptoms, then, will be according to the occasional cause, and the part on which the influence of that cause is exerted; and among a still greater number, the following present themselves.

Heartburn, wind in the stomach and bowels, sour eructations, squeamishness, nausea; those ejections of water from the stomach which are usually called water-pangs; loss of appetite and indigestion, or an uncommon craving for food, with a digestion unusually quick, faintness, debility, hunger, with an uneasy sense of emptiness, and a desire after particular and very often improper food; cramps and sharp pains in the stomach, oppression of the breast, anxiety, timidity, and low spirits; spasms in the bowels, and violent pulsations in the belly; gripings, colic pains, and windy rumblings, in the bowels; the belly sometimes too lax, but much more frequently costive; pains in the back and belly, resembling the gravel; an irritation and heat in the neck of the urinary passage; a frequent inclination to make water, the discharges of which are sometimes in small quantities, and at others very copious, and perfectly limpid or clear; a difficulty of breathing in some cases, and in others a plentiful expectoration of thin and frothy spittle; alternate flushes of heat over the whole body, and general shiverings; a sense of cold, as if water was poured over certain parts of the body, and this succeeded by an universal glow; flying pains in the limbs, back, and between the shoulders; cramps or convulsive motions of the muscles; sudden twitchings or startings of the legs or arms; involuntary motions of the muscles of the head, neck, or limbs; general convulsions affecting the stomach, bowels, throat, limbs, and almost the whole body, the patient struggling as in a fit of epilepsy; faintings which continue long, and in some instances succeed each other at very short

intervals; violent palpitations of the heart, a variable pulse, a dry cough and constrictions of the lungs, which sometimes return periodically; hiccups, yawning, deep sighs; a sense of suffocation, as if from a swelling or lump in the throat; involuntary flowing of tears, and fits of laughter without cause: if the patient is cool by day, and his pulse moderate and regular, yet at night hot flushes spread over the whole body, the pulse grows more quick and strong, and he awakes with a kind of faint sickness. To these symptoms may be added, a giddiness, which is particularly felt on any sudden motion; violent pains in the head, which have frequent periodical returns; fixed, acute, and piercing pains, in particular parts of the head, generally about the crown; noises in the ears, and dimness of sight, or mistiness before the eyes, which are also affected with dryness and sharp pains; objects seen double, offensive smells in the nostrils, obstinate watchings, accompanied with uneasy sensations, which the patient himself can neither describe or account for, but which wear off on getting out of bed; disturbed and interrupted sleep; horrid dreams; night-mare; constant drowsiness; fear, peevishness, sadness, and sometimes despair; at others, the spirits too active and gay, producing wandering thoughts and idle imaginations; loss of memory, apprehensions of death from diseases which are not present, and suggestions of danger which exist only in the ideas of the weakened and impaired faculties.

After the patient has been long affected with some of these symptoms, (for it is not to be supposed they should all attend the same person) he sometimes becomes melancholy or mad, or falls into a dropsy, black jaundice, the pulmonary consumption, palsy, epilepsy, apoplexy, or some other fatal disease.

Those who are liable to the above symptoms may be divided into different classes: such as, notwithstanding they continue in general

general good health, are yet, from an extraordinary irritability of the nerves, apt to be affected with tremors, palpitations, faintings, or convulsions, on any sudden impulse of the passions, or from any thing which affects disagreeably the most sensible parts of the body; those may be said to be disposed to nervous disorders, or to have what is usually termed a *nervous habit*.

Those who, added to the symptoms last mentioned, are troubled with indigestions, flatulencies, and indisposition of the stomach and bowels, are said to be *hysteric*.

Those whose passions are less apt to be disturbed, and who are therefore less affected by palpitations of the heart, faintings, and the like, but yet are subject to indigestion, want of appetite or extraordinary craving for food, belchings, costiveness, oppression of the breast, low spirits, wandering and unpleasing thoughts, interrupted sleep, and symptoms of the same kind, are ranked as *hypochondriac*.

The fourth class are composed of such as labour under any of the foregoing complaints accompanied with a fever, or when a fever produces several of those symptoms; in which cases the disorder is called a *nervous fever*. Of this disease we have already treated.

Those who are generally *nervous*, the *hysteric*, and the *hypochondriac*, are therefore the subjects to whom this chapter is particularly addressed; and it is necessary to caution all those who labour under chronic nervous complaints, against an idea which may in some measure be considered as one of the symptoms of the disease: those who are thus afflicted are too apt to expect a cure from every remedy but that which is immediately applied, and thus wandering from physician to physician, and from prescription to prescription, and catching at distant hopes of relief, they give no one medicine fair play, nor continue the use of it long enough to afford a possible chance of success; and to this, much more than the insufficiency of the prescriptions, it is owing,

that men complain of having swallowed loads of physic, the only effect of which hath been the aggravation of all the symptoms; whilst, if they had been content to pursue one certain course of medicine properly advised, they might probably have received all the benefit which the nature of the case would admit; and this is for the most part little more than temporary relief; nervous disorders of the chronic kind are seldom radically cured; the irritability of the nerves, and the disposition to be affected by very slight causes, remaining after all the efforts of medicine, relapses are so constantly to be expected, that the immediate removal of all the apparent symptoms can hardly ever be considered as a restoration to health.

But to give a little light to this melancholy prospect it may be remembered, that however troublesome nervous complaints may be, they are seldom attended with any considerable degree of danger, unless they are left too long unnoticed; in which case, as well as from improper treatment, they are apt to degenerate into some of those fatal disorders which we have already mentioned; and nervous patients may also find some consolation from being assured, that they are not very liable to disorders of the inflammatory kind, or hardly ever suffer severely from the consequences of them.

In all chronic diseases, regimen is of great importance; and food, liquors, air, and exercise, ought to be the first immediate objects of our attention, in our endeavours either to palliate or remove.

Many of the nervous symptoms proceed apparently from indigestion; light animal food, therefore, the juices of which have not been exhausted by over dressing, or vitiated by rich sauces and spices, with a proper mixture of raw sallads and such boiled vegetables as are warm and grateful to the stomach, and not apt to turn sour on it or to produce flatulencies, will be proper: we mention *boiled vegetables*, because the pernicious

pernicious exotic custom of stewing them in high and rich gravies, destroys every wholesome quality, and renders them the vehicles of a slow but certain poison.

The liquors may be water with a toast, or in which toasted bread hath been boiled, either with or without a mixture of wine; or if wine and water disagrees or produces windy complaints, a table-spoonful of brandy in a pint of water may sit better on the stomach.

A glass or two of good wine after meals, where the patient has been accustomed to it, may be taken without injury; but perhaps this cordial may be used to more advantage, drank between the meals, eating at the same time a crust of bread or a biscuit whenever the patient feels himself empty and faint.

All hot liquors are prejudicial, punch and drams abominably hurtful; if biscuit and fruit can be substituted instead of tea and coffee for breakfast, the patient will by degrees find the benefit of the change; where this cannot be complied with, milk chocolate, milk broth, or whey, with bread and butter, will be a more wholesome morning meal.

Whoever wishes to get rid of nervous complaints, will do well to avoid flesh suppers; but those who are so habituated to the use of them as to find a difficulty in abstaining from this indulgence, should sup early enough to use exercise after, and eat nothing heavier than chicken, rabbit, fish, or the like; for such as must have suppers, shell-fish will prove least offensive.

Those who labour under nervous disorders, should eat sparingly but frequently; never overloading the stomach, or suffering it to remain long empty; small quantities of food at a time are easily digested, and a constant supply of it prevents faintings, wind, and eructations.

Air, which is heated either by the sun or fire, relaxes and consequently injures the nervous patient; that which is damp or

moist is equally prejudicial; a cool and dry air therefore is to be chosen, but where the body is considerably weakened, and particularly where the internal parts of it are principally affected, it will be necessary to guard against cold by additional garments, and those of the woollen kind next or near the skin. Nothing contributes more to the relief of nervous complaints, than a due temperature of air; an extraordinary degree of heat enervates and heightens that languor, faintness, and depression of spirits, which are the constant companions of those who are afflicted with these disorders; and cold is apt to affect the breast, stomach, and bowels, and aggravate all the symptoms by which those tender parts are affected.

The best-devised prescriptions of medicine will have little effect, unless the use of them is accompanied with exercise, the kind and degree of which must be suited to the patient's situation, strength of body, the nature and violence of the symptoms, and other circumstances: those who are exceedingly reduced, must begin with frictions, by a flannel, coarse cloth, or flesh brush, which not only excite a gentle and salutary perspiration, but promote the circulation; to those whose strength is less impaired, riding on horseback will be attended with the best consequences; but whether taken in this way, in a carriage, or by walking, it is essentially necessary, and not to be dispensed with.

Voyages and travelling have both been recommended; the sea itself, and the effect this kind of motion produces on the body is very often serviceable, as well as the regular and progressive exercise of long journeys; but the benefit derived from either, is probably augmented by the change of situation and the variety of objects presented, which affording the faculties constant employment, and not engaging them too deeply, keep the mind in a state of continual amusement, without permitting that intenseness of thought which is apt

to prey upon the spirits, and irritate the nerves.

To prevent these effects, it is in all cases necessary to keep the mind in as calm a state as the nature of human exigencies will permit; sudden impressions of fear or anger operate on the nerves like an earthquake on the terrestrial globe, agitating, convulsing, and in a manner overturning the whole system; and grief, anxiety, and resentment, unstring and unbrace them by degrees, and with a less violent, though equally certain effect, render them incapable of performing the natural functions of life.

It therefore behoves those who are attendant on the nervous patient, to conceal from him as much as possible all unpropitious events in his affairs, and other causes of affliction; to bear with the frequent changes of his temper, and the unsatisfied and wayward disposition of his mind, as accidental effects of disease; to humour, and, as far as possible, to comply with his whims and expectations, and to contribute to his amusement, by diversions, lively conversations, and innocent mirth.

From the variety of symptoms which we have recounted as attendant on nervous disorders, it will appear that medicine must be adapted to each particular case; that some of these cases have been already described and prescribed for, and that others will be treated of under the heads of those diseases, whose appearances they represent, and into which they are most disposed to degenerate: it remains for us at present to point out some remedies which may be generally useful, and others which apply to such peculiar circumstances as are not sufficiently provided for in other parts of this work, and where the symptoms are manifestly nervous.

The body should always be kept open by gentle purgatives; tinctures of rhubarb and senna generally answer this purpose, and are much to be preferred to stronger or more active purges.

The bark is almost an universal remedy; it may be taken in substance, or a tincture of the following composition.

Take of Peruvian bark in powder, one ounce—gentian root, and the rind of Seville orange, of each half an ounce—coriander seeds, and the lesser cardamom seeds, of each two drams. Let all these ingredients be well bruised and mixed in a mortar, and infused a week in a quart of French brandy, shaking it frequently: at the end of that time, pour or strain it off fine; and let the patient take a table-spoonful, either in a glass of wine and water, or water alone, half an hour before each meal.

If indigestion, vomiting, and pains in the stomach, are occasioned by too great sensibility of that part, from twenty to thirty drops of laudanum may be added to that dose of the last mentioned infusion, which is to be taken before dinner; but as these complaints frequently happen from faults in the stomach, gentle emetics, magnesia, and elixir of vitriol, ought to be tried before the opiates are administered, which in most nervous cases that are not spasmodic should be very cautiously prescribed, being apt rather to increase the symptoms in future, though they may procure present relief.

In cases of convulsive motions, or fixed spasms in particular parts of the body, a mild opiate is recommended to be taken a short time before the expected return of the fit; but where the symptoms are violent, bleeding is first necessary, and then the opiate may be given in larger doses: in different degrees and cases, camphire, castor, musk, asafoetida, æther, or volatile alkaline spirits, may afford relief; to which may be added general or partial warm baths, fomentations of the part affected, and where the spasms are of the intestines, emollient clysters. The effects of sudden fear or surprise, have in some instances been favourable, and sometimes spasms are removed in one part by applications which produce pain in

in others ; such as blisters, acrid plasters, and such frictions as may occasion a temporary inflammation : relief may in some instances be obtained, by applying tight bandages to the particular part affected.

If the convulsions are attended by fainting fits, the pulse should be consulted, and bleeding be either practised or omitted, according as it is found more or less strong : acid spirits may be held to the nose, hot bricks or bladders of hot water applied to the soles of the feet ; the legs, arms, and feet should be also strongly rubbed, or if it can be easily effected, the lower extremities may be placed in water at least blood warm ; as soon as the patient can swallow, a glass of water with a table-spoonful of vinegar may be given, unless he is of a relaxed and enfeebled habit, in which case a gentle cordial may be more proper.

When a violent pain in the stomach is accompanied with cramps, bleeding may be of use, but not unless the patient is of a strong or robust constitution ; in other cases, if there is a tendency to vomit, the stomach may be first washed out with a moderate quantity of camomile or carduus tea, after which a clyster of common composition, with the addition of forty, fifty, or sixty drops of liquid laudanum, may be administered, and repeated if the cramps return : musk may also be given, in doses from four grains to ten, with any cordial liquid, and the stomach may be rubbed with the anodyne balsam.

If the nervous symptoms appear in a windy or hysterical colic, and a costiveness, give a laxative clyster, adding from one dram to two of asafoetida ; but when these complaints are also attended by vomitings, these discharges may at first be promoted by a few draughts of the water in which toasted bread hath been boiled, and as soon as this liquid will remain on the stomach, add a fourth part of peppermint water, and from five to ten drops of liquid laudanum ; clysters with liquid laudanum may also be

given, and saline mixtures swallowed in the act of fermentation : if these remedies fail to remove the complaints, pills of calomel and aloes are recommended to procure a passage, still continuing the use of the opiate clysters.

Palpitations of the heart will require nearly the same treatment and medicines as other convulsive or spasmodic symptoms ; but if suppressed evacuations are the cause, these complaints will be removed by restoring them : whatever disturbs the spirits is apt to bring on this nervous symptom, which will generally abate when the patient's mind is brought back to a state of calmness and composure.

Nothing contributes more to relieve lowness and oppression of spirits than cold bathing, which should be continued regularly through all the seasons of the year, except in extreme winter ; persons of corpulent, fleshy, and florid habits, may bathe daily ; but twice or thrice a week will be sufficient for those who are spare and thin : if this course appears to weaken the patient, or he is chilled, faint, or sick, for any considerable time after bathing, it should be omitted ; nor is it by any means to be practised when the internal parts of the body are particularly affected.

Besides the medicines which we have already mentioned as general remedies, there are others which may be offered as serviceable, under particular circumstances, to lessen and remove the irritability of the nerves.

Of these the following may be taken, as well to strengthen the stomach, and indeed the whole constitution, as to lessen, at least for a time, the too great sensibility of the general nervous system.

Take gentian root sliced, the tops of the lesser centaury, and the yellow rinds of Seville oranges, of each half an ounce. Infuse these ingredients six days in a quart of Madeira wine. Give two, three, or four table-

table-spoonfuls twice a day, in the morning and afternoon.

But if acids prevail in the stomach, and a particular coldness is felt there, a quart of boiling water may be poured over the same ingredients, strained off when it is cold, and taken with a mixture of French brandy, to the amount of one part in four; and if either of these infusions should prove heating, this effect may be prevented by the addition of a small quantity of elixir of vitriol to each dose. If bitters should lie heavy on the stomach, or injure the appetite, which sometimes happens, they should by all means be omitted; and instead of these medicines, from twenty to thirty drops of the elixir of vitriol may be taken at the same time, in a glass of water, or brandy and water, according to circumstances: when this preparation agrees with the stomach, it is an excellent strengthener, assists an impaired appetite, helps digestion, and allays windy complaints; and if heat in the stomach occasions a foul tongue, and

a degree of thirst, both these symptoms will receive relief from this medicine.

Simple filings of iron, in doses of ten or fifteen grains, taken twice or thrice a day, sometimes succeed in these complaints; but if the filings are offensive to the stomach, from ten to fifteen drops of the tincture of the flowers of iron may be taken, instead of the substance, in a glass of wine and water.

Though we have enumerated a variety of medicines, yet the patient must not flatter himself with the hope of obtaining a perfect cure by the use of all or any of them; the utmost he can expect is a suspension of the symptoms, which will return whenever he remits in the articles of regimen, whenever he indulges in excesses of eating or drinking, omits to use constant and moderate exercise, or suffers his passions to betray him into violence or sink him into despondency: regularity of life, and equanimity of temper, are the only preservatives against the attacks and relapses of chronic nervous disorders.

CHAP. XIII.

Of Palsies.

A *Palsy* is an abolition or diminution of sense, voluntary motion, or feeling, or of all three: when the whole body below the head is affected, or the lower half of the body, it is called *paraplegia*; if one whole side, or one side of the head and face are attacked, it is said to be an *hemiplegia*; and when the disorder is confined to a particular limb, it is denominated a *paralysis*, or *particular palsy*.

When the muscles of the face are paralytic, the source of the disorder is in the brain; but if these are free, the nerves of the spine only are affected.

The degree of danger attending this disease, is determined by the importance of the part affected: when only a particular limb is the subject of it's attack, a cure, though not a speedy one, may be expected; but when any of the internal and vital parts suffer, little hope can be entertained; and if the part remains cold and insensible, or shrinks and wastes away, or the faculties appear to have suffered injury, the cure is difficult and doubtful, and in these cases the disorder frequently continues during life.

The palsy may proceed from suppression of

of accustomed evacuations; from a translocation of the diseased matter of acute disorders; from whatever compresses or contracts the nerves, and prevents the regular exertion of the nervous powers; from strong ligatures, dislocations, fractures, wounds of the brain or spinal marrow, or of the nerves themselves; depressions of the skull, or other pressure on the brain; or from tumors, either inflammatory or scirrhus, in the coats of the nerves: it may also be occasioned by irregularity of living, drinking to excess, and particularly of ardent spirits; from excessive heat, extreme cold, drinking large quantities of hot and weak liquors, and from the poisonous effluvia of metals and minerals.

Previous to the attack of this disease, a shivering or sense of cold water running through the part is felt, then a numbness and a giddiness of the head, which gradually terminates in a deprivation of sense and motion in the part affected; when it seizes one side, the other is frequently racked with excruciating pains and convulsive motions; the mouth is distorted, the powers of speech lost, and as the disorder advances, the memory fails, and all the faculties of the mind are impaired in proportion to the violence of the symptoms. A palsy which affects a particular limb, is sometimes preceded by an unusual weight in the part destined to suffer, and the motion of the whole body is slow, accompanied with paleness, and a kind of stupidity and numbness; the flesh of the part itself is loose, soft, or flabby to the touch, and cold; and after the seizure the limb sometimes appears puffed up, and at others shrunk and shrivelled.

The regimen must be suited to the patient's age, habit of body, and constitution: when this disorder attacks those who are young, vigorous, and full of blood, a cooling diet will be necessary; but in old age, and when relaxation or weakness is the principal occasion of the disease, the food should be nourishing, and rendered warm and

comfortable by spices and aromatics of the vegetable kind, such as mustard, horseradish, and the like; and the liquors, generous wines, wine or mustard whey, negus with nutmeg and cinnamon, or brandy and water.

Exercise is to be taken at all times, and in all ways that may not expose the patient to damp, moist, or cold air; if his strength will admit of a journey, it may be of use, and a voyage to a warmer climate is frequently attended with considerable advantage.

When the disease is apprehended to arise from a fullness of blood, occasioned by an excess of vital heat, it may be necessary to bleed, and to repeat the operation till the heat is reduced to the standard of health; and cooling medicines, baths of water very little warmed, and gentle purges, may be used; but this treatment is only proper in a recent case: where the disorder hath been of long continuance, and the blood is impoverished, these methods must not be attempted.

In that palsy which affects the aged, infirm, and weakly, who are indeed much more liable to this disease than the young, healthy, and vigorous, a very different course must be followed.

In the fit, bottles or bladders of warm water should be applied to the feet; and if the breath seems to be stopped, and the motion of the lungs ceases, warm breath should be breathed into them through the patient's mouth, and as soon as he can swallow, cordial medicines should be administered.

When he is recovered from the immediate fit, endeavour to discover the particular cause of the disorder, and proceed on that ground.

A stimulating clyster should be administered as speedily as circumstances will admit; this may be the common composition, with half an ounce of rock salt, or the like quantity of common salt.

A gentle emetic of ipecacuanha will also

be useful; which may be worked off with a few draughts of carduus or camomile tea, or warm water in a quart of which half a tea-spoonful of the flour of mustard hath been mixed.

Particular attention is to be paid to the application of blisters: when laid over the nape of the neck or on the back, they are apt to occasion convulsive twitchings; and though blisters are useful in general palsies, yet they are still more so when only particular limbs are affected; and in those cases the proper places of application are where the nerves of the respective parts originate; so when a palsy attacks the upper extremities, the blister should be applied to the spine of the neck, and towards the shoulders; and when the disorder is seated in the lower extremities, the sacrum, or the very lowest part of the back-bone, is the properest place for them.

After these evacuations, warm, nervous, and corroborant medicines are necessary; and any of the following forms may be adapted to particular cases.

Take of horse-radish root sliced, two ounces—of white mustard-seed bruised, three drams—of the root of wild valerian, half an ounce—of rhubarb bruised, three drams. Beat the whole well together in a mortar, and infuse three or four days in a quart of French white wine, shaking it frequently. Strain it off, and give four table-spoonfuls twice or thrice a day.

Take of water, one ounce and half—of nutmeg water, two drams—castor powdered, and salt of hartshorn, of each one scruple—of syrup of oranges, one dram. Make a draught, to be taken every sixth hour, or oftener, as circumstances may direct.

Take milk of gum ammoniac, and simple cinnamon water, of each three ounces—of the volatile foetid spirit, three drams—of syrup of saffron, half an ounce. Mix, and take three table-spoonfuls twice or thrice a day.

Take compound spirit of lavender, tincture

of foot, and the volatile foetid spirit, of each three drams. Mix, and take forty drops frequently in any proper liquid.

Take spirits of sal volatile, compound spirits of lavender, and tincture of castor, of each two drams. Mix, and take forty drops in a glass of white wine two or three times a day.

The Bath waters, used both internally and externally, are of singular use; and where circumstances do not admit of their being applied, baths of rain, or other light water, in which aromatic ingredients have been boiled or infused, may be substituted.

When the palsy hath been occasioned by mineral fumes or exhalations, the cure is extremely difficult; *lead*, in particular, destroys the sensation: so that when this disease arises from that cause alone, purging medicines are required to be given in doses very much exceeding the usual quantities.

Relief may be obtained in a palsy of the belly by a fomentation of hot wine, in which spices and other aromatics have been boiled; and a little of the same preparation may be taken internally, if the pulse does not indicate any degree of fever.

Of external applications, the saponaceous liniment is perhaps equal to any other in efficacy, though the following hath been recommended.

Take of Barbadoes tar, one ounce—of camphorated spirits of wine, four ounces—of spirit of turpentine, half an ounce. Make an embrocation, and anoint the part affected with the palsy, and the spine of the back, night and morning.

But *electricity* seems to be preferable to every other external remedy; the shock should be received near the origin of the nerves which extend to the diseased part, and the violence of it, as well as the repetitions, must be proportioned to the age and strength of the patient, and the circumstances which attend the disorder.

Rubbing

Rubbing the part with a warm hand, a flesh-brush, or dry flannels, should not be omitted; and if by these means a perspiration is excited, warm flannels should be immediately applied, and constantly worn.

A great variety of simple remedies are prescribed for the cure of this disease, some of which may be found to merit regard.

Take white and red sage, of each a handful. Boil a few minutes in a quart of strong white wine: strain it when cold, and bottle it. Let the patient take a small wine-glassful morning and evening.

Take cephalic snuff, or any other composition of the like kind which will provoke sneezing, mornings and evenings.

Take a table-spoonful of white mustard-seed every morning in a glass of white wine.

Mix flour of mustard with warm water, and as soon as the pungency of the mixture affects the nostrils, rub the diseased part with it before a fire.

Shred white onions, and bake them slowly in an earthen vessel till they are quite soft; spread a plaster thick with this poultice, and apply it so as to cover the whole part affected.

Take half a dram of the powder of wild valerian root in a glass of white wine three times a day: or, infuse half an ounce of the powder, and half an ounce of sage leaves, in a pint of white wine, and take two or three table-spoonfuls three times a day.

C H A P. XIV.

Of the Apoplexy.

THE *apoplexy* is a sudden and universal privation of all sense and voluntary motion; wherein, though the patient is to all appearance dead, yet the pulse continues to beat, and the heart and lungs to move, though the breathing is difficult and oppressed.

Persons advanced in age, those who are indolent, or who indulge in excesses of eating and drinking; those of gross or sanguine habits, and whose necks are short; are most liable to this disease.

There are two different species of apoplexies, and the distinctions demand our utmost attention, as the method of cure in each is totally different.

The first is the *sanguineous apoplexy*, and the second is called the *serous apoplexy*.

The cause of both is a compression of the brain; in the former case by a sudden and violent effusion of blood, and in the

latter by a collection of some watery fluid: and both may be occasioned by whatever throws too large a proportion of blood on the brain, or prevents its return from the head—such as violent passions; hard drinking, especially of spirituous liquors; excessive labour or exercise; intense study, or fixed attention on any particular object; high living; suppression of any evacuations, either usual or extraordinary; repulsion of eruptions on the skin; exposure to intense heat or extreme cold; sudden changes from the one to the other; tight ligatures round the neck; poisonous fumes of metals or minerals; or external injuries, such as blows, wounds, or bruises on the head.

The usual forerunners of these seizures, are acute pains in the head, giddiness, dimness of sight, loss of memory, heaviness, noises in the ears, an involuntary flow of tears,

tears, difficulty of breathing, the night-mare, a grinding of the teeth during sleep, a coldness of the whole body, and especially of the extremities. Those who have already been subject to those diseases should carefully attend to these preceding symptoms; and, according to the habit of body, prepare against the attack by bleeding, opening medicines, and a low diet.

On the approach of the fit, the patient sometimes falls down at once, as if he had received a musquet-ball in his heart; at others his fall is accompanied with violent shrieks, and immediately his eyes close, and sense and voluntary motion are totally suspended.

The symptoms of a *sanguineous apoplexy*, are a full and strong pulse; a flushed and bloated countenance; breathing so difficult as even to endanger suffocation, and accompanied with a snorting noise; the patient's breast ceases to heave, and seems constricted as if it was bound by cords; his neck appears swelled, and the vessels there and about the temples seem full and distended; the eyes are either closed or fixed, glossy, and prominent; the excrement and urine in some instances pass away involuntarily; and the stomach discharges it's contents by vomiting.

The danger seems to be in a great measure proportioned to the difficulty of breathing and swallowing: if the patient respires easily, and can get down liquids, we may have good hopes of recovery; but if the respiration is extremely difficult, and sometimes intermits, or if what the patient attempts to drink is returned immediately through the nose, very fatal consequences may be apprehended.

In the sanguine species of apoplexy our first care must be to give the patient air and ease in his cloaths; for this purpose his head should be lifted up, and he should be placed in a sitting posture, and as nearly erect as possible; whatever is tied round the neck, as well as his wrists, should be

loosened, though his garters may be tied tight, which may prevent the too quick return of the blood from the lower extremities; and every part of his garments should be examined, and all strictures and compressions should be removed from the head, neck, breast, stomach, and belly: the patient should be brought near a window, or placed in the open air.

As soon as it can conveniently be done, a considerable quantity of blood should be taken from the arm or jugular veins; and this operation may be repeated again at the distance of an hour or two, sooner or later, as occasion may require: some recommend opening the temporal artery during the fit.

A lenient clyster with oil, and a table-spoonful of common salt, should be given as speedily as possible, and repeated every hour or two, till the patient is capable of taking medicines by the mouth. Instead of these clysters, some advise the following.

Take of the common clyster decoction, twelve ounces—emetic wine, and syrup of buckthorn, of each one ounce. Make a clyster.

Or, take the leaves of rue, tobacco, or pennyroyal, of each a handful—of *coloquintida*, or bitter apple, two drams. Boil the whole half an hour in as much water as will at the end of that time be reduced to ten or twelve ounces.

As soon as the patient is so far recovered as to be able to swallow, he may drink freely of whey, made either of cream of tartar or mustard, or the opening decoction of tamarinds and liquorice; emetics are extremely dangerous in this species of apoplexy, and all spirituous liquors, and volatile spirits and essences, should be avoided, as they generally tend to accelerate the motion of the blood towards the head.

A cooling purge may also be immediately given, which may be of Glauber's salts with

with the addition of nitre, manna dissolved in an infusion of fenna, or the like; and laxative medicines should be repeated occasionally, to keep the body open.

A spoonful or two of common salt, dissolved in half a pint of water, and poured down the patient's throat as soon as possible, even during the fit, is said to contribute to the speedy removal of it; and this may be tried, as no possible inconvenience can arise from the attempt, even if it should fail.

If the patient remains long in the fit, or continues in a torpid or insensible state after the removal of the more violent symptoms, it will be necessary to apply blisters to the head, back, legs, thighs, and even all over the feet; though some prefer sinapisms or warm poultices to these extremities.

The symptoms of the *serous apoplexy* are nearly the same as those of the sanguineous, only that the pulse is less strong, the countenance pale, or at least not so violently flushed, and the difficulty of breathing less oppressive.

In this kind of apoplexy the same cautions are necessary with regard to raising the patient's head, his posture, and loosening his dress: likewise attempts to get down the solution of salt and water may be very properly made; and perhaps taking away a small quantity of blood, without repeating the operation, may rather be attended with advantage; though this evacuation is not so necessary in the serous as in the sanguineous apoplexy, and should never be made if the pulse is remarkably small, fluttering, or intermittent.

Clysters, as above directed, may also be administered and repeated; and purges of *tinctura sacra*, or the sacred tincture, should be taken as soon as the patient can swallow, and continued every third or fourth day.

In this case also it will be serviceable to blister between the shoulders, and on the

fleshy parts of the legs, and the feet should be constantly wrapped in flannels.

In full habits mustard-seed and horseradish, are very efficacious remedies; the former should be swallowed whole, to the amount of two or three table-spoonfuls in a day in different doses, and the latter may be freely eaten with the patient's food, or an infusion or decoction of it may be taken occasionally.

Volatile spirits and valerian are also recommended, and may be taken in the following forms.

Take of the milk of gum ammoniac, one ounce—of spirituous pennyroyal water, two drams—volatile foetid spirit, and balsamic syrup, of each one dram. Make a draught, to be taken every sixth hour.

Or, take of castor, half a scruple—of the powdered root of *arum*, or cuckow-pint, (which is also sometimes called wake-robin) one scruple—of syrup of saffron, enough to make a bolus. To be taken twice or three times a day with three spoonfuls of the following julep.

Take of simple pennyroyal water, six ounces—volatile tincture of valerian, and foetid volatile spirit, of each three drams—of syrup of saffron, two drams.

The diet of those who are afflicted with the sanguineous apoplexy, should be thin, cooling, and low: those who suffer by attacks of the serous kind, should take light but nourishing food; and in both cases the mind should, if possible, be kept undisturbed, as agitation of spirits is very apt to occasion returns of the fits.

Those who have once been attacked by an apoplectic fit of either kind, are extremely liable to relapses, in which case each succeeding seizure is more violent and more dangerous than the former: to prevent these returns, great attention will be necessary to avoid whatever may occasion them; and to this end it will be necessary

for such persons, and indeed for all who are of full and sanguine habits, with short necks and very ruddy or florid countenances, to abstain from flesh suppers, and from sleeping with their stomachs full of any kind of food; to shun hot rooms, and to refrain from violent bodily exertions, and particularly from walking, riding, running, or other motion, under an exposure to the summer's sun; to guard against cold, especially in the feet; to go early to bed, and rise betimes; and to resist the impulses of anger, or other violent passions.

It will also be adviseable for those of apoplectic makes and habits, to take regular but gentle exercise, so as to excite mo-

derate perspiration without producing fatigue; to keep the body open; and perhaps it may not be improper to lose a little blood once or twice a year, either in the spring and fall, or previous to those seasons in which they have been subject to preceding attacks; and, if to these precautions are added, a continued drain, either by blister or seton, and a regard to postures and strictures, which should always remind them never to stoop much, to lie with their heads low in their beds, or to wear any thing tight about their necks, great hopes may be formed of escaping from the future visitation of this disagreeable and dangerous disease.

CHAP. XV.

Of the Epilepsy, or Falling Sickness.

AN *epilepsy* is an involuntary and violent convulsive contraction of the nerves, membranes, and muscles of the whole body, attended with a total deprivation of sense.

Weakly children, and those who are treated too tenderly, and are too much indulged, are most liable to it; and men are in general more subject to it than women.

Epilepsies are said to be in some instances hereditary, or may more probably be occasioned by frights and alarms of the mother during pregnancy: they may also proceed from flatulencies in the stomach or bowels; from spasms of the intestines; from intense application to study, or to the exercise of any of the finer arts; from leading a sedentary life; from the acrid matter of eruptive or other diseases translated to the brain; from the suppression of accustomed evacuations; from the stoppage of old ulcers or sores, or of issues, setons, or other occasional drains;

from excesses of all kinds, whether of wine, women, or the table; from worms; from violent pains in the more tender parts, such as those occasioned by stones being forced through the ureters, or the like; from violent passions of the mind, such as anger, joy, grief, and in particular from sudden fright or fear; or from hysteric or hypochondriac affections.

Epilepsies may also arise from external injuries, such as wounds, blows, or bruises of the head; from collections of fluid, whether blood, matter, or water, on the brain; from a polypus; from bony concretions forming on the skull internally; or from ill conformation of the brain itself.

The symptoms are various in different persons: some are suddenly seized without any previous notice, and in others the attack is foretold by a train of complaints; of these some are affected with lassitude, heaviness,

heaviness, and inactivity; a sense of weight, or dull pain in the head; disturbed sleep, and a slow and unequal pulse; paleness of countenance, diminution of the usual quickness of apprehension, and a constant inclination to sleep; unusual terror of mind, noises in the ears, flutterings and palpitations of the heart; twitchings, or spasmodic convulsions of the hands, so that the patient lets fall whatever he holds in them; inflation, or windy swelling of the breast, interrupted breathing, rumblings of the bowels, a discharge of offensive stools, and of large quantities of pale urine; and some complain of a sensation like the ascending of a cold vapour from the extremities to the vital parts.

But whether the attack is preceded by all or any of these symptoms, or none of them occur, the approach of the fit is sudden, and in general unexpected; the patient falls instantly to the ground; his thumbs are contracted and fixed strongly to the palms of his hands; his eyes are distorted, and the white parts of them only visible; all sensation, both external and internal, is lost; he froths at the mouth, and makes either a kind of hissing or snorting noise; if his tongue happens to be thrust through his teeth, it is miserably torn; and, in some cases, all the joints are seized with a violent trembling, and in others the unhappy subject of this disease exhibits strange and disagreeable distortions and gestulations: some are not convulsed, but are so rigidly fixed by an universal spasm, that no art or force can move the limbs or members; and others emit their seed, excrement, and urine, involuntarily.

When the violence of these symptoms begins to abate, the remission is only at intervals; the eye-lids remain fixed, the teeth continue to grind, or the tongue hangs out of the mouth; and the disappearance of these symptoms denotes that the paroxysm is at an end.

The patient now rolls himself restlessly

about; yawns as if just awakened from sleep; his countenance appears heavy and melancholy; he makes efforts, apparently painful, to stretch and extend his limbs; seems uneasy in every posture; and, if not laid on a bed, attempts to walk with particular caution, as if afraid of falling; and the veins on his forehead appear swelled and distended.

The patient is entirely ignorant of every thing that has passed, looks round with silent wonder on his friends or attendants, and is in general so affected as not to know his most intimate acquaintance for some time after his recovery. In most cases the fit is succeeded by an inclination to sleep; the patient rests quietly for an hour or two, and awakes much refreshed and relieved from all his complaints, except fatigue, foreness, and head-ache.

Sometimes these fits return periodically, and the patient receives warning of their approach by some of the foregoing symptoms; in other cases the returns are uncertain and wholly irregular: but in both cases the fit may be brought on by violent exercise, drinking to excess, or stooping after a meal, and when the stomach is full of undigested food.

That epilepsy which is unattended with convulsive motions, and in which the patient seems to be asleep, is the most difficult of cure: there can be no hope of removing the hereditary kind. The approach of puberty in males, and the eruption of female periodical discharges, or the birth of a child, frequently produce favourable changes in the habits of epileptic patients. If the first attack of this disease happens after the patient hath passed his twentieth year, the cure is said to be doubtful; if after forty, altogether improbable: when the constitution and habit of body is good, the fits not very frequent, and unattended with highly aggravated symptoms, it frequently yields to a perseverance in proper means for its removal.

But

But if the fits return often, and no measures are taken to check their violence, the patient by degrees grows dejected, indolent, and inattentive; he is troubled with a continual giddiness; if he lifts his eyes to observe any particular object above him, he is seized with tremblings; his temper becomes uneven and sour; and other unhappy circumstances contribute to render his life miserable.

Those who are subject to this melancholy disease should eat light but nourishing food, and chiefly of the animal kind; pork is said to be prejudicial, and those fowls, the flesh of which is brown, such as ducks, geese, and other water fowl; windy vegetables should be avoided, and spirituous liquors; and the wine drank should be diluted with water: a free air, moderate exercise, and bathing, especially in the sea, will assist in preventing the returns of the disorder; and above all things the mind should be preserved as calm and unruffled as possible.

In the fit, if by any means a wedge of metal can be thrust between the patient's teeth, so as to separate the jaws as wide as he can easily stretch them in health, the paroxysm will generally cease; and where the patient has any notice of the approach of the fit, he may prevent it by introducing such a wedge into his mouth; and when the fits are preceded by any peculiar sensations in the extremities, such as twitchings, convulsive spasms, tremblings, or the like, bandages applied to the part so affected, and continued upwards, will often prevent the seizure. Extraordinary instances have occurred of effecting perfect cures by cutting down to the seat of these particular sensations wherever they are first perceived.

If the patient is of a full or sanguine habit, and the disease is apprehended to arise from obstructions in the brain, bleeding will be necessary; and in that case also, emetics and opening medicines should be

administered: and if the stoppage of any drains or usual discharges has occasioned the disorder, they should be restored, or others substituted as speedily as possible.

After these evacuations, the following medicines have been recommended; and such of them may be selected as seem best calculated to answer the immediate circumstances of the case.

Take musk, and factitious or artificial cinnabar, of each ten grains—of simple syrup, enough to make a bolus. To be taken morning and night.

Or, take of cinnabar of antimony, one scruple—of castor powdered, half a scruple—of conserve of rosemary, fifteen grains. Make a bolus, to be taken every eighth hour, with three or four spoonfuls of the musk julep, or the following.

Take of water, an ounce and half—tincture of foot, volatile tincture of valerian, and simple syrup, of each one dram. Mix for a draught.

The following volatile draught hath also been advised.

Take of castor, half a scruple—of salt of hartshorn, eight grains—of simple cinnamon water, one ounce and half—of Damocrates's confection, one scruple. Make a draught.

Or, take of the powder of Peruvian bark, one scruple—of oil of rosemary, two drops—of simple syrup, enough to make a bolus; which may be taken every fourth hour, and after it the following draught.

Take of the simple bitter infusion, one ounce and half—of chalybeate wine, two drams—of the aromatic tincture, one dram. Mix.

The following electuary is the prescription of a physician, whose practice and writings have been very deservedly held in the highest estimation.

Take

Take of the bark in powder, one ounce—of wild valerian root, half an ounce—of simple syrup, enough to make an electuary. Of this a dram may be taken morning and evening; and it should be continued three months, omitting the use of it a day or two twice or thrice in that space of time. If, from any apparent symptoms, there is reason to apprehend that the disorder is occasioned by worms, half an ounce of powdered tin may be added to the electuary.

The flowers of zinc have been lately highly recommended for the cure of epilepsies; this medicine is directed to be taken in a pill or bolus, twice or thrice a day, beginning with small doses of a grain, and increasing the quantity as far as the stomach will bear.

The extract of stramonium, or the thorn-apple, taken in doses, increasing from half a grain to a dram, is also said to have produced very happy effects in this disease.

The *oleum animale*, or Dippel's animal oil, hath been prescribed as an efficacious medicine in the cure of this disease, in doses of ten, fifteen, or twenty drops, twice a day. And the several prescriptions following have been recommended by different persons.

Electricity, receiving the shock immediately as the fit approaches, if any notice is given; otherwise, in the intervals, increasing the violence gradually.

Take four or five drops of liquid laudanum, in the morning fasting, every day for a week or fortnight.

Boil a handful of the leaves of the orange tree in a pint of water; strain it off when cold, and divide it into two parts, one to be taken in the morning, the other in the afternoon. Repeat for a fortnight or longer.

Or, dry and powder the leaves of the orange tree, and give half a dram twice a day.

Take a dram of mistletoe of the oak powdered, every six hours, drinking after it a tea-cup-

ful of strong infusion or decoction of the same plant.

A milk diet, persevered in for three months without deviation, hath sometimes proved an effectual cure.

Blue vitriol hath also been held to be useful in this disorder, given daily, or twice a day, in small doses of a grain or two; and the salt of vitriol, in doses of two or three grains twice a day, hath been recommended: but the operation of these medicines, and especially of the former, is so violent, that they are seldom admitted as internal prescriptions.

Asaetida in substance, or in tincture, persisted in for a considerable length of time, hath in some instances removed this disorder; and both this and other medicines will be considerably assisted by a seton, issue, or other drain.

But we must not omit to mention a simple remedy, which is said to have been taken with great advantage in this disease; and though its reputation seems to have been for some time suspended, yet it hath been lately restored by the recommendation of very eminent physicians: this is the herb *cardamine*, called also *meadow cresses*, *ladies smock*, and *cuckow flower*; the flowers of this plant must be gathered as soon as they are fully expanded, dried in the air, but not in the sun, and reduced to a powder; which may be administered in doses from half a dram to one dram and half, twice or three times a day, according to circumstances, and is said to have succeeded when opium, camphire, and other antispasmodics, have failed; but no good effects are to be expected from this medicine, unless the use of it be continued for some months: nor must the patient be discouraged, though he should be seized with fits after he has pursued this course some time: should that be the case, he may probably find that the symptoms are less violent,

which may inspire him with good hope of a perfect cure.

When this disease returns at certain periods, or the approach of the fits seem to be influenced by the moon, the changes of that planet should be attended to; and the patient should prepare himself either by an emetic or opening physic, or both, according to habit of body.

Those who are afflicted with epileptic fits, should carefully avoid whatever tends to promote them; indigestive food, excesses, violent passions of the mind, and improper postures of the body, though not the immediate causes of these disorders, contribute in no small degree to the frequency of the returns and the violence of the symptoms.

CHAP. XVI.

Of St. Vitus's Dance, and other Convulsion Fits.

THE former disorder is said to take its name from certain acts of devotion performed by female devotees at the shrine of a saint of this name, wherein they worked themselves up to a pitch of extasy, and used dances or gestures which bore some affinity to the exercise of dancing: this disease has been by some asserted to be of a paralytic nature, by others it has been thought to be convulsive, but the more general opinion is that it partakes of both.

It may be occasioned by an acrid humour falling on the nerves, by worms, by the obstruction of periodical or hæmorrhoidal evacuations, or from a general debility of the nervous system: it may also, in some cases, mark the decline, and in others the approach, of epileptic diseases.

This complaint hath been described to be a kind of convulsion, which principally attacks children of both sexes from ten to fourteen years old, but more commonly girls: it first shews itself by a lameness, or rather an unsteadiness or apparent uselessness of one of the legs, which the patient drags after him like an idiot; it afterwards proceeds to affect in like manner the arm of the same side, so that if the hand be brought to the breast, or extended to any other part

of the body, it can by no means be kept a moment in the same posture, but is distorted, or snatched by a kind of convulsive motion into some other position; nor will any thing less than actual force confine it to any one situation. If the patient attempts to convey food or liquids to his mouth, the effort is attended with pain, and occasions a thousand different and odd gestures, by the convulsive spasms withdrawing his hand from the part to which it is directed; and if he succeeds in reaching his mouth, he is obliged to snatch and swallow it with the appearance of greediness, because it is not in his power to continue his hand in the same posture, long enough for him to take into his mouth what it offers with the decency and deliberation used by those in health.

Though the symptoms which attend this disease are sometimes so violent as to render the patient's life miserable, yet it is seldom dangerous; and when the constitution is good, and the complaint hath not been of long continuance, reasonable expectations may be formed of a speedy cure. Those who have been afflicted with this disorder are, however, very subject to relapses: and if it is hereditary, or become habitual through neglect or ill management,

ment, the cure may be extremely difficult, or it may degenerate into an epilepsy, or confirmed hypochondriac melancholy.

Where this disorder is apprehended to proceed from worms, the following medicines have been prescribed.

Take of filings of tin, from half a dram to three drams, according to the age and strength of the patient, and the violence of the disease—of conserve of rue, enough to make a bolus. To be taken twice a day.

Or, take of the filings of tin, from one scruple to half a dram—of rhubarb in powder, from three grains to six—of simple syrup, sufficient to make a bolus. To be taken morning and evening.

In other cases, gentle emetics are prescribed, and a course of Æthiop's mineral in considerable doses, with the Bath waters, if they can conveniently be taken.

Nervous and strengthening medicines are also advised, such as musk, valerian, and the flowers of cardamine or ladies smock; the bark, orange-peel, and other bitters; chalybeats and cold bathing, particularly in the sea.

The regimen should be attended to; the food should be light and nourishing, and the liquors mild and diluting; strong drinks of all kinds, and especially spirits, are to be avoided.

Of the *convulsions* to which infants are frequently liable, we have already treated; and the attacks of this kind to which adults are sometimes subject, are for the most part epileptic symptoms of other spasmodic diseases.

Where they can be distinguished from those complaints by their being seated somewhat differently, they may be occasioned by excessive passions of the mind; uneasiness in the bowels, stomach, or other nervous parts; worms; violent or acrid medicines; matter repelled from the surface of the skin; suppression of monthly evacuations in women, or of the piles in either sex; or from irritating poisons.

Sometimes convulsions come on suddenly, and at others are preceded by certain particular symptoms; such as coldness of the extremities; a sense of trembling or shivering seizes the very lower part of the backbone, and runs up through the spine of the back like a cold vapour; the left side is affected with a stiffness and windy pain; the body is costive; the urine thin and pale; tremblings and uncommon depressions and languor also attend, and serve as preludes to more violent symptoms.

The fits are sometimes short and sometimes of longer duration, and the muscular contractions more or less strong in different patients: the fit in some instances leaves a considerable oppression of the spirits, together with a faintness, restlessness, and sense of weariness; and in particular cases is followed by vomiting, sleepiness, and delirium; but others feel very little uneasiness after their recovery from it.

Those whose habits are generally weakly, and their juices vitiated, are most subject to these disorders; persons of hasty tempers, fine parts, and delicate sensations, are liable to these dreadful attacks; and young people much more frequently than those who are advanced in years.

During the continuance of the fit little or nothing can be done, but to prevent the patient from injuring himself by blows or bruises: care should be taken, however, to free the patient from all restraint of his cloaths; and if his neck should swell, or his face appear violently discoloured, it may be necessary to attempt giving him some assistance, by getting open his teeth as directed in the fits of epilepsy.

The patient should be confined to a light diet, and should drink diluting liquors plentifully, but in small quantities at a time.

Bleeding is seldom to be attempted in this disease, and never during the continuance of the fit; in the intervals, where the patient is of a sanguine habit, and feverish.

verish symptoms attend, it may sometimes be necessary.

If the fits are occasioned by suppressions of the periodical discharges, or of piles, warm baths, antispasmodic medicines, and gentle opiates, are adviseable; emollient laxative clysters are also useful, and when the *intestinum rectum*, or strait gut, is affected by the spasms, from twenty to thirty drops of liquid laudanum may be added to the clyster with considerable advantage.

The body should in all cases be kept open by manna, rhubarb, fenna, diuretic salts, or other gentle purgatives; and where these complaints have been produced by the repulsion of the itch, or other morbid humours from the skin, magnesia and other absorbents will be required to correct the first passages.

When this disorder proceeds from worms, the worms must be destroyed, and the present symptoms allayed by clysters of milk, with sweet and oily substances; irritating medicines must in these cases be avoided.

The following prescriptions must be adapted to circumstances.

Take of asafœtida, fifteen grains—of camphire, five grains—of Damocrates's confection, one scruple—of simple syrup, as much as will make a bolus. To be taken every six hours.

Or, take the compound powder of myrrh, fifteen grains—of Russian castor, five grains—

of Damocrates's confection, one scruple—of syrup of saffron, enough to make a bolus. To be taken as above, with three spoonfuls of the following julep.

Take of water, six ounces—the volatile tincture of valerian, and foetid volatile spirit, of each three drams—of Russian castor, two drams—of white sugar, three drams.

Musk, given in pretty large doses, produces very favourable effects, and may be taken in either of the forms which follow:

Take of musk, from half a scruple to half a dram, in proportion to age and other circumstances—of conserve of roses, as much as will make it into a bolus, which may be repeated every fourth or sixth hour.

Or, take of musk, rubbed with white sugar, half a dram—of simple nutmeg water, five ounces. Make a julep, of which two or three table-spoonfuls may be taken every third or fourth hour.

Where particular parts of the body are affected by convulsive spasms, external applications may sometimes be successful; in these cases blisters upon the part affected will frequently afford relief; embrocations also, either with æther, or the saponaceous or volatile liniments, have been recommended; and Bates's anodyne balsam, with the addition of a small quantity of the expressed oil of mace and oil of mint, hath sometimes produced happy effects.

CHAP. XVII.

Of the Tetanus, and locked Jaw.

OF the first, which is a spasmodic or convulsive disorder, there are three distinct kinds: the *emprostotonos*, in which the body is bent violently and rigidly for-

ward; the *opisthotonos*, wherein the body is in like manner inclined backward, and that which is properly called the *tetanus*, when the body is held in an erect posture.

These

These dreadful cases are most commonly met with in warm countries, but sometimes occur even in these milder climates; and may be occasioned either by the irritation of a wounded nerve or tendon, or from the stoppage or imprudent check of some immediate discharge, such as diarrhoea, dysentery, or the like.

In the former case, the first care will be naturally directed to the wound; and proper applications to lessen the acute pain of the affected part will considerably assist the operations of medicine.

Those which are recommended in this case are principally opium and musk: when the patient can swallow, they may be administered in the following manner.

Take of musk, from eight grains to twelve—of opium, from one grain to five—of *theriaca Andromachi*, enough to make a bolus. Repeat it every four or six hours, with a few spoonfuls of the musk or camphire julep.

The quantities in which these medicines are to be administered, must be directed by the patient's habit of body, the violence of the spasms, and other circumstances.

When medicines cannot be got down by the mouth, still larger quantities of opium should be dissolved and thrown up in clysters; the warm bath should be frequently used, and the patient should be carefully covered with warm flannels, and laid in his bed the moment he comes out of the water: bladders of warm water, or fomentations applied to the belly and stomach, may also be useful; and warm plasters, with embrocations of the volatile liniments, may help to relax the limbs.

Or the following—

Take the saponaceous liniment, and Barbadoes tar, of each two ounces—of the balsam of Peru, two drams—oil of rosemary and lavender, of each half a dram—of opium, a dram. Make a liniment.

If, at the first approach of the spasm, the

pulse is small, slow, and languid, and afterwards grows more quick, but becomes irregular and intermitting, it may be necessary to administer clysters with the foetid gums, and to give such cordial medicines as castor, spirit of hartshorn, or the volatile foetid spirit.

The *locked jaw* is a rigid contraction of the muscles which raise the lower jaw; and may arise from nearly the same causes as the disorders last mentioned, though it has been frequently attributed to cold.

The treatment may be principally the same as that directed in the *tetanus*, though in this case blisters are sometimes admitted, and are applied either to the throat or between the shoulders; the oil of bricks is also recommended to anoint the jaw; and flannels moistened with camphorated oil and liquid laudanum, and applied to the jaws and neck, have sometimes given relief.

But opium is in this complaint also to be chiefly depended on for the cure: if it can be conveyed into the patient's stomach by the mouth, it may be given with musk and camphire, as prescribed in the former part of this chapter; but as this is seldom possible until the violence of the disorder is considerably abated, the clysters, with still larger proportions of opium, must be frequently administered, until the symptoms give way, and the patient is restored to a capacity of receiving nourishment and medicine in the natural way.

After any of these spasmodic disorders, great care is necessary to prevent returns; the use of the opium should be discontinued gradually; the spine of the back should be rubbed with a mixture of the volatile liniment and Barbadoes tar; and the patient should enter on a course of the bark: to these medicines must be added a strict regard to regimen, both as to diet, air, and exercise; the food should be light and easily digestible, and the drinks such as are neither heating or windy; the patient should breathe a free air, but carefully avoid exposure to

cold, damp, or moisture; he should wear a piece of flannel over the pit of his stomach, and take particular care not to suffer his feet to be wet; he should take constant but very moderate exercise; and, above all things, guard against violent passions of the mind, which tend in a very great degree to irritate the nerves, and dispose the human frame to these most melancholy and frequently fatal disorders.

C H A P. XVIII.

Of the Palpitation of the Heart.

THE *palpitation of the heart* is a quick, strong, and irregular trembling or vibratory motion of that organ, to which those are most subject who are of a firm, sanguine habit, and melancholy disposition; those whose minds are tender, and who are subject to alarms and frights: young persons who are full of blood and juices, and those whose evacuations of blood, either periodical or accidental, are suppressed or checked, are more peculiarly liable to it.

This disorder may be occasioned by a defect in the evacuations last mentioned; by a subtle acrid matter in the blood, produced by the repulsion of the itch, or some other eruptive disorder; by violent agitations of mind; by intense study or thoughtfulness; by an aneurism or polypus; by hectic heats; by strictures of the belly and limbs, from wearing too strait cloaths; and in young women tight stays are not unfrequently the cause of this disorder.

This disease frequently intermits, and more especially during the time that the body is at rest; but after the occurrence of any of the causes above mentioned it returns, and very often with redoubled violence; the pulsations are sometimes so great, that the motions may be perceived even through the cloaths; it is more or less violent at different times, and the duration of the paroxysm is equally uncertain: sometimes the attack is made whilst the patient sleeps, and he is suddenly awaked by this disagreeable and painful sensation; in some instances it only

happens in the day, and is felt most severely after eating; in others the attack is preceded by anxiety and uneasiness about the breast; during the paroxysm the breathing is more or less difficult, the pulse is intermitting, and does not correspond with the motion of the heart, but is low and weak; when the symptoms are most violent, the uneasiness about the breast increases, and is accompanied with considerable languor of the whole body, and after the fit of palpitation is over, it is succeeded by an universal tremor, and particularly of the joints. When polypous concretions in the heart cause palpitations, the painful vibration is augmented immediately after using any violent exercise, and even going up stairs, or the slightest commotions of the blood, increase the complaint; the anxiety about the breast is aggravated, the pulse is weak, unequal, and sometimes intermitting; the difficulty of breathing is heightened even to a degree of suffocation, and fainting fits come on, which are sometimes fatal. Whilst the polypus continues fixed, no palpitations are felt, but when it is removed, and fluctuates in the ventricles of the heart, partially or wholly stopping the passage of the blood through some or other of the vessels, a palpitation ensues, and speedy death is the probable consequence. When a redundancy of blood is the occasion of a palpitation, the countenance is florid, the vessels distended with blood, and the pulse is large and strong. The longer the intervals are between

tween the pulsations, the more violent are those motions, and the more dangerous is the fit. One particular symptom always attends and distinguishes the palpitation of the heart, which is an acute and pungent pain above the right orifice of the stomach.

When the paroxysms of this disorder are violent, return frequently, and continue a considerable length of time, a fatal swooning or suffocation is always to be apprehended; and an unequal pulse, with a considerable difficulty of breathing, are dangerous symptoms: when it proceeds from a fright or terror, and returns often, it threatens to produce a polypus, which may prove of the very worst consequence.

Bleeding, as copiously and frequently as the patient's habit of body, constitution, and strength, will admit, is the chief remedy that can be offered; but if the disorder should proceed from weak nerves, or a relaxed habit of body, this evacuation must be omitted; and in that case nervous medicines, the bark, and steel, must be depended on.

If the fit is occasioned by wind in the stomach, or the patient is costive, his skin dry, and his extremities cold, oily and warm clysters will be necessary, and the feet should be rubbed with hot flannels and immersed in a warm bath: if an asthma attends the palpitation, blisters will be necessary; and the volatile tincture of valerian, or other volatile drops in the infusion of valerian, may be given twice or three times a day as circumstances may require.

When the palpitation arises from a weak and irritable state of the stomach, gentle emetics, the *tinctura sacra*, or sacred tincture, by way of purge, and bark as a strengthener, are the best remedies; and immediate relief may probably be obtained from the use of æther, spirits of hartshorn, or the following prescriptions.

Take of tincture of castor, half an ounce—

of simple alexiterial water, six ounces—of syrup of saffron, half an ounce. Mix to a julep, of which take a spoonful occasionally.

Or, take of the volatile tincture of valerian, one ounce—of pennyroyal water, eight ounces—of syrup of saffron, one ounce. Make a julep, a spoonful of which may be taken frequently.

When this disorder proceeds from gouty spasms, blisters, warm baths for the feet, and volatiles, are most likely to give relief; to which, if the patient is full of blood, bleeding may be added to good purpose.

Moderation in diet and exercise are to be recommended; excess in either will increase the disorder, and prove dangerous: but nourishing food and gentle motion will contribute to the removal of this disorder, by furnishing the patient with strength to resist its attacks.

To prevent the returns of this complaint, the particular causes which produce it should, if possible, be discovered, and carefully avoided; and, in particular, if symptoms of a polypus occur, it will be necessary to abstain from all violent exertions of body, or agitations of mind, either of which may tend to loosen it. In every case all ligatures and compressions of the body, and particularly about the breast and stomach, should be removed, and the cloaths should be made perfectly easy; the patient should never continue long in the cold, nor expose himself to the hazard of getting wet, especially in the feet: upon the approach of a fit, the extremities should be well rubbed, and a clyster instantly administered; and it behoves the patient himself, and those about him, to keep his mind as calm and undisturbed as possible in this disease, excessive passions having often produced effects almost instantaneously fatal.

C H A P. XIX.

Of the Hiccup, Night-mare, and Spasms or Cramp in the Stomach.

THE former of these complaints is a spasmodic or convulsive motion of the stomach, gullet, and muscles which serve the purposes of swallowing: it is the general opinion that the stomach alone is the seat of this disorder, though some have conceived that the diaphragm is affected.

The immediate cause is allowed to be an irritation of the stomach, occasioned by improper food or liquors, or by excesses in either; by wounds or other injuries to the stomach; by inflammation there, or in the diaphragm or other intestinal parts; by sharp or acrid poisons; or by sour juices, indigestion, and wind in the stomach or bowels.

In mortifications, malignant fevers, and some other acute diseases, it is generally a very alarming symptom, especially when it follows considerable hæmorrhages, or other large evacuations.

When it happens in tender stomachs from making a hearty meal, or from eating hard or windy food, relief may generally be obtained by drinking a glass of good wine, or of any spirituous liquor, diluted with an equal quantity of warm water.

When this complaint arises from the irritation produced by poisonous matter, emetics are first necessary; after which large draughts of milk, and frequent doses of oil, both swallowed and given in clysters, will be serviceable: and where it is occasioned by any of the patient's food remaining undigested on his stomach, a table-spoonful of strong vinegar will frequently give relief.

If the *hiccup* proceeds from inflammation of the stomach or other internal parts, it is attended with a very considerable degree of danger; in this case bleeding will

be necessary, the stomach should be fomented, or bladders of warm water applied to it; and the patient should drink diluting liquors, or, according to the state of his pulse, wine whey, with a small quantity of sweet spirit of nitre in every draught.

If it is symptomatic, and attended with wind, it is commonly relieved by the fœtid volatile spirit, with a few drops of liquid laudanum; the musk julep is also serviceable: but when it originates in a foul stomach, gentle emetics and purges will be necessary, to the latter of which should be added small quantities of opiates.

If the hiccup is apprehended to proceed from mortification, the bark and other antiputrescents are the only remedies which afford any hope of success.

When this complaint is obstinate, and the returns of it frequent and violent, the following medicine hath been recommended.

Take the fœtid volatile spirit, and tincture of wormwood, of each two drams. Mix them, and take forty or fifty drops frequently in a spoonful or two of the musk julep. A few drops of liquid laudanum may be added occasionally.

But in those cases musk is the most powerful remedy, and may be given in doses from ten grains to twenty made into the form of a bolus, when the violence of the symptoms directs; or a few drops of the volatile aromatic tincture, or the compound spirit of lavender, may be taken now and then on a lump of sugar; and plasters of Venice treacle, or the common stomach plaster, may be applied to the pit of the stomach.

The *incubo*, *incubus*, or *night-mare*, generally,

nerally affects those who are troubled with indigestions and crudities in the stomach; it is said to precede or lay the foundation for an epilepsy.

This disorder hath been attributed to a stagnation of blood in the brain and lungs, and to a redundancy of blood; but it is unquestionably a nervous complaint, and arises principally from indigestion; so that those whose nerves are weak, who lead inactive lives, and indulge themselves in the pleasures of the table and bottle, are most commonly afflicted with it. It is frequently occasioned by wind, and those who are subject to it should avoid much vegetable or other flatulent food; study, anxiety, grief, or other oppressions of the mind, may also produce this disease; but late and heavy suppers contribute more than any thing to this disagreeable sensation.

This disease always attacks the patient in his sleep, and is at first felt in an uncommon load, weight, and pressure, on the breast and stomach, threatening instant suffocation, and depriving the sufferer of the powers of speech, who in vain struggles to disengage himself from the supposed burden, and to cry out for help: in this situation he is terrified with apprehensions of instant danger; sometimes his imagination presents enemies ready to murder him, and at others he fancies himself in the fire, the water, or falling from a precipice; at length he starts, groans, or cries out, and then the tormenting phantom seems to leave him suddenly; and awaking, he finds his strength exhausted, his spirits depressed, and an universal palpitation or tremor through his whole frame.

When the patient happens to lie on his back, this disorder seizes him, and in no other posture; the moment he is moved, or any attempt is made to awake him, the complaint vanishes.

When the returns of this troublesome disorder are frequent, if the patient is of a full or sanguine habit of body, it may be

proper to bleed; in all cases it is necessary to keep the body open.

Some recommend a glass of brandy to be taken at going to rest, but this is undoubtedly the introduction of a very bad custom; perhaps a little peppermint water may be as effectual, unless the patient eats a very hearty supper of windy food, in which case a small quantity of spirits will be useful.

But if the patient uses moderate exercise, avoids all hard and windy food, is cautious and temperate in the use of liquids, and goes to bed with a light supper and a cheerful mind, he may in general, without the assistance of medicine, bid defiance to this dæmon of darkness.

The *cramp in the stomach* is a dangerous complaint, suddenly seizing the aged and infirm, and those who are of gouty, nervous, or hypochondriac habits, and without immediate assistance bringing on convulsions and spasms, which often end fatally.

The treatment of this complaint must be nearly such as we have directed in the tetanus and other spasms occasioning external rigidity of the muscles; clysters of the laxative kind, if the patient is costive, and considerable quantities of liquid laudanum, either taken in a spoonful or two of any proper liquid, or administered by way of clyster with warm water, will be most likely to give ease; in the former case from twenty to thirty drops may be given, and in the latter from forty to sixty: if the patient complains of sickness, nausea, or inclination to vomit, his stomach may be washed out with camomile or carduus tea.

Musk may also be given to the quantity of ten or twelve grains, with Venice treacle enough to make it into a bolus; and this may be repeated every four, six, or eight hours, according to circumstances, with a spoonful or two of the camphire julep after every dose.

The stomach plaster, or a plaster of Venice treacle, may also be applied to the pit

of the stomach, which should first be rubbed with the volatile or saponaceous liniment, adding a few drops of liquid laudanum to either; or Bates's anodyne balsam, may answer the same purpose; fomentations and bladders of warm water are likewise recommended.

Blisters to the ancles have been advised where the pains of the stomach are violent and of long continuance; and if the patient's strength and habit of body will admit of bleeding, this evacuation may be useful; but if the complaint is apprehended to arise from gouty matter, this operation will be dangerous, and in this case cordials will be necessary.

There is also another disorder of the stomach, which is called the *stomachic passion*, which is attended with symptoms equally horrible and dangerous; this disease, however, occurs but seldom.

The symptoms are an aversion to food, the very thought of which occasions heartburn, anxiety, an effusion of spittle, nausea, and vomiting: the patient endures hunger without complaint, but chewing his food is troublesome, and swallowing it intolerable; though he abhors common food, yet he has desires for things improper and unusually eaten; if he has been prevailed on to get down any nourishment, he complains immediately afterwards of violent pains between the shoulders. After the disease has continued some days, the patient grows restless, his sight becomes dim, he has noises in his ears, heaviness in the head, and a torpor or numbness of the limbs; sometimes he imagines that the spine of his back is drawn towards his legs, and in whatever posture he is placed, shifts it almost instantaneously, seeming to be in perpetual agitation; he desires to drink without being thirsty, and continues to walk about though he complains of drowsiness

and inclination to sleep; he grows pale, thin, feeble, faint, fearful, reserved, but fretful, and inclines to moping and melancholy.

During a fit or violent paroxysm, the patient frequently faints; his joints are cold and numbed, whilst the palms of the hands and other parts of the body are hot or covered with a dew-like moisture; to these symptoms succeed increased restlessness and anxiety; despondency, alteration of the countenance, a small weak pulse, and a wasting of the body for want of sustenance; or, on the contrary, a ravenous appetite without digestion, and an acid, acrid, or putrid quality, in the contents of the stomach: in the aggravated state of this disease the patient is speechless, and his teeth clenched or grinding; and when there is any considerable degree of inflammation, the swallowing is difficult, and attended with a kind of strangulation, which has been denominated a *stomachic quinsy*; hardness or tension of the stomach, wind, and rumblings of the bowels.

The causes are said to be a discharge of matter from the belly upon the stomach, intense thought, grief, neglect of proper nutriment, and want of rest; colds, continued indigestions, vomiting, and other violent or excessive evacuations.

In order to obtain a cure, the first attention must be to gratify as much as possible all the patient's inclinations, and to compose his mind and spirits; the juice of quinces is recommended as highly serviceable, and warm and spicy stimulatives, such as pepper and ginger, with aloes and other bitters, are said to be useful: musk and opium will be proper during the fit, provided the inflammation do not run high; and after the complaint is removed, the return of it may be prevented by the bitter decoctions, the bark, and chalybeats.

C H A P. XX.

Of the Loss of Spirits, and Fainting Fits.

THE former of these is commonly considered as a disorder of the mind, but it is frequently occasioned by bodily disease; and all those whose nerves are weak, are more or less liable to low spirits.

When the bowels and stomach are in a relaxed state, the spirits will be affected, and in these cases infusions of the bark with spices, and preparations of steel with aromatics, may be useful; if the depression of spirits proceeds from foulness of the stomach and bowels, or obstructions in the intestines, purges of the *tinctura sacra*, or sacred tincture, will be necessary; and when it is occasioned by suppressions of the periodical discharges, or of the piles, these evacuations must be restored, or others substituted; and, in the mean time, bleeding will be of essential service.

But whether lowness of spirits is the effect of these, or any other accidental cause, or is brought on by grief, anxiety, or distress, the removal of the complaint does by no means depend wholly on medicine; on the contrary, air, exercise, generous living, lively or amusing company, and change of situation, are much more important than the best-conceived medical prescriptions: these may no doubt assist in the cure; but when the mind is relieved from the pressure under which it has laboured, and regains it's vigour and alacrity, the body will soon be restored to health and strength, and vibrate in unison with it's powerful director.

Fainting fits also arise from weak nerves; and those whose constitutions are naturally delicate, or have been reduced by acute diseases, or chronic and lingering pains, are most subject to them: in the first instance they are seldom dangerous; but when from neglect the returns are frequent,

and they become habitual, they always prove prejudicial, and in some cases fatal.

The slightest degree of this disorder is when the patient perceives and understands what passes, but is incapable of speaking; this is called *fainting*, and often happens to those who are subject to windy complaints, without the pulse suffering any remarkable change or alteration. If he loses his understanding and feeling, and the pulse sinks considerably, it is called a *syncope* or *swooning*; and if this syncope is so violent that the pulse seems extinguished, and the breathing cannot be discerned, with a coldness of body, and a wan and livid countenance, it is called an *asphyxy*, which may signify a total resolution, as it is frequently followed by death.

The causes may be either a redundancy or want of blood; indigestion, or other disorder of the stomach; nervous complaints; passions of the mind; a polypus in any of the principal blood vessels; opiates, and other volatile and active medicines; sudden changes from heat to cold, and the contrary; excessive weakness of body; fasting; loss of blood, or other violent evacuations; and worms.

Persons, who without any manifest cause are subject to frequent faintings, usually die suddenly; and they are often found to have polypuses in some of the chief blood-vessels: when fainting fits are brought on by violent paroxysms of anger or rage, they are dangerous, and equally so when occasioned by worms.

The air, which has been repeatedly breathed, loses it's spring or elasticity, and becomes unfit for the purposes of respiration; hence those who frequent assemblies and other polite places of public amusement, are extremely

extremely subject to fainting fits: it therefore behoves the tender and delicate to avoid such contaminated air; and those who have the conduct and superintendence of public places, to let them be well ventilated, and purified by the admission of constant streams of fresh air.

Great caution is also necessary to be used by persons who have been long exposed to cold, and who generally faint upon entering a house, approaching the fire, or drinking hot liquors; to avoid these inconveniences, such persons should take care not to go into a warm room immediately after an exposure to a cold air, to approach the fire by degrees, and neither to eat or drink any thing hot or heating, till the body has been gradually restored to a temperature moderately warm.

All that can be done during the continuance of the fit, is to endeavour to restore the motion of the heart by placing the patient in a fit posture; vinegar and water, or water alone, may be sprinkled on his face, and a little of the former should be poured down his throat; strong vinegar should be held under his nostrils, the fumes of this acid heated should be introduced into the room, and as soon as the patient can swallow, he should take a glass of good wine, or of some other cordial; he should also be removed into the open air, or brought to the window, and should be laid on his back, with his head rather lower than the other parts of the body.

After the fit, attempts should be made to remove the cause: if it should be pain, small doses of opiates may be given at convenient distances; if violent evacuations have occasioned faintings, gentle anodynes should also be prescribed, and a light cordial and nourishing diet, to the liquid part of which saffron may be added, but neither fluids or solids should be swallowed in any considerable quantities at a time.

When the patient is of a robust habit, and is overcome by a redundancy of blood, it

will be proper to bleed, but this operation should not be performed till after his recovery from a fit, unless some very particular circumstance occurs, which demands the immediate loss of blood. If indigestion, or other disorder in the stomach, is the cause, a vomit may be given in the first instance; and in nervous cases, an easy reclining posture, fresh air, and sweets or foetids held to the nose, both being tried to discover which has the best effect, give speedy relief. When the passions of the mind, such as anger, grief, or the like, occasion this disorder, the fits are frequently tedious, and when removed, return at very short intervals: in these cases the patient should be kept quiet, the strongest vinegar should be held to his nose, and as soon as he begins to recover, administer small doses of liquid laudanum in any cordial water, and now and then let him take the sweet spirit of vitriol in his common drink; if he complains of nausea or sickness, with a bitterish taste in his mouth, a gentle emetic will be necessary, and after it the sweet spirit of nitre, or nitre itself, with a small quantity of rhubarb. And though in most common cases of fainting bleeding is rather injurious, and particularly where the patient is of a delicate or nervous habit, yet when the patient is in other respects strong and healthy, and the disorder hath been brought on by any immediate discomposure of the mind, either from fright or anger, it may be necessary; but in those cases it will be proper that he should drink freely of warm diluting liquors, acidulated with lemon or orange juice, and keep himself perfectly quiet for some hours after the operation.

It is almost unnecessary to say, that the faintings of women during pregnancy, and those which are occasioned by offensive smells or the like, may in general be removed by carrying the patient into the air, and applying volatile salts, Hungary water, or eau de luce, to the nostrils during the fit, and giving a cordial immediately after recovery.

When

When these fits proceed from actual weakness, brought on by excessive fatigue, want of sustenance, or loss of blood from wounds, or evacuations of the like kind, a nourishing diet, and small quantities of good and generous wines, diluted with water or not as circumstances may direct, will effectually prevent their return; but in cases

of long fasting, great care should be taken that the patient returns to his usual portion of food gradually, as the stomach will at first be incapable of retaining any considerable quantity, nor will the powers of digestion be immediately ready to perform their part towards carrying it off.

CHAP. XXI.

Of Lethargic Diseases.

THE *coma*, *lethargy*, *coma vigil*, *coma somnolentum*, *cataphora*, and *carus*, are diseases of sleeping, or the total want of it; of these disorders the *coma* is the least dangerous, and the *lethargy* most fatal.

The immediate cause of all the kinds of sleepy disorders, or those in which sleep is concerned, is apprehended to be a defect or obstruction of the vital principle, occasioned by tumors pressing on the brain, or collections of watery fluids there; by a fulness of the vessels, occasioned by the suppression of periodical discharges, or stoppage of the hæmorrhoidal bleedings; they may also be occasioned by an excessive use of spirituous liquors, by exposure to poisonous or offensive steams or vapours, and by blows on the head, or other external injuries.

In the *coma vigil*, or *watchfulness*, the patient feels a strong inclination to sleep, but is either wholly incapable of taking rest, or if he falls into momentary slumbers, he awakes without being in the smallest degree refreshed: this complaint is attended with a general burning pain in the head, and a sense of ebullition in the brain, like the fermenting of liquors, but the patient is not delirious; it is always symptomatic, accompanies acute fevers, and generally

precedes and denotes the approach of a phrenzy.

The *coma somnolentum* produces languor and perpetual drowsiness; the patient drops asleep whilst he is eating, in conversation, or engaged in business; he is easily awaked, but soon falls asleep again; and notwithstanding this disposition, seems to be in perfect health. This disorder generally seizes those who are advanced in years, and lead inactive and luxurious lives.

The *carus* is a profound sleep, out of which the patient cannot be roused without extreme difficulty; though he seems sensible of pain when attempts are made to awaken him by pinching or pricking his flesh, yet he either remains silent, or uttering a few words, falls again into the same degree of sleep.

This disorder is sometimes original, and at others symptomatic; in the latter case, if it happens in the beginning or during the progress of acute fevers, and is attended or followed by hiccups or convulsions, it is soon fatal: when the fever is at the height, or on the decline, and the patient is considerably weakened, though the sleep be of extraordinary duration, yet if it is accompanied with gentle perspiration, it is rather a favourable omen; but when the patient's

strength is so wholly exhausted that he lies without sense or motion, this sleep is generally his last.

A *lethargy* is a heavy continued sleep, with very few intervals of waking, and those only of short duration: and so completely is the patient lost in stupefaction, that if he opens his mouth to yawn or receive sustenance, he forgets to close it; and if he sets about eating, putting on his cloaths, or any other employment, he stops in the midst of it and falls fast asleep. It is a species of apoplexy, though not so immediately destructive, and is attended with a fever and quick pulse.

The brain of those who have died of sleepy disorders, hath in some instances been found to be overflowed with water, and in others abscesses, tumours, and scirrhosities of the brain, have been discovered; and in most the vessels of the *pia mater*, or that membrane which involves the brain, have appeared to be very much distended with blood.

A lethargy is always attended with danger, but more particularly when the limbs are affected with a general tremor, and a cold clammy sweat appears on the face.

When the cause is apparently an excess of the vital powers, and a considerable fever attends, the membranes of the brain may be apprehended to be in an inflammatory state, and bleeding will be absolutely necessary: but this case seldom occurs; the vital powers are generally below the standard of health, and if there is a fulness, it is of that kind which does not admit of bleeding, but must be carried off by purges, and such medicines as promote evacuations by urine and perspiration.

When the animal powers are manifestly defective, the patient may be relieved by holding volatile salts to the nostrils; but pungent acid spirits are preferable, of which the spirit of verdegriſe may be used if it can be procured; if not, strong vinegar may be blown up the nose.

Emetics may be used where it is apprehended that the stomach is over-loaded; but if there is any particular fulness, these medicines must be omitted, and clysters with rock-salt should be frequently administered: the body may be kept open by manna, rhubarb, or the diuretic salts; and blisters may be applied to the neck and feet, or stimulating cataplasms to the latter may perhaps answer the purpose better.

Such medicines as, being snuffed up the nose, promote a discharge of matter from the head, and excite sneezing, are also recommended in lethargic cases; but they ought to be used with much caution, if the patient is of a sanguine habit or full of blood, as they invite the flux of humours upwards, and so endanger an apoplexy: where they can be used with safety, one of the best is made by dissolving ten grains of white vitriol in half an ounce of water.

If the body, and particularly the lower extremities, are frequently well rubbed with a flesh-brush or warm flannel, it may be of considerable use.

When either of these disorders is occasioned by blows or other external injuries, and an extravasation of blood or serum is suspected, bleeding may be used more freely, and the same methods should be taken as are usually directed to relieve contusions on the head; though in this case, if the symptoms are violent, the operation of trepanning is generally found necessary.

If the bowels or other intestines are affected with spasms, the antimonial wine may be prescribed; and the following medicines may in most cases be useful after necessary evacuations.

Take salt of hartshorn, and salt of wormwood, of each one scruple—of white wine, an ounce and half. Make a draught, to be taken every night.

Take the volatile tincture of guaiacum, and volatile tincture of valerian, of each two drams. Take from one tea-spoonful to two, twice or thrice a day.

Pouring

Pouring cold water on the head, after it hath been shaved for the purpose, is also recommended, and may tend to remove the sleepiness, and strengthen the membranes of the brain.

After recovery from these diseases, relapses must be carefully guarded against,

by regulating the diet, which should be light and nourishing; by avoiding all excesses, and heavy suppers; and by the use of constant moderate exercise, which must be proportioned to the patient's strength, so as not to produce fatigue.

C H A P. XXII.

Of Hysteric and Hypochondriac Disorders.

HYSTERICS may be classed among those nervous disorders, the variety, uncertainty, and obstinacy of which, have hitherto baffled the utmost efforts of medicinal skill to discover certain cures, or to prescribe with any degree of well founded confidence a system of medicine and regimen.

These disorders have been supposed, as may be gathered from the name, to arise at first from a preternatural irritability of the womb; it is, however, undoubtedly produced by the irritation of the nerves, either general in the whole habit, or of the stomach, intestines, or some other particular part; and girls towards the approach of the periodical discharge, and women of relaxed and tender habits, and who are in the first stages of pregnancy, are most liable to it.

Hysteric complaints may be occasioned by the same causes as are productive of other nervous diseases, but are usually brought on by wind or acrid humours in the stomach; by the obstruction or suppression of the female evacuation; or by violent agitation of mind, from anger, grief, or vexation.

These disorders are marked by a great variety of symptoms, the principal of which are, a strangulation and a rising in the throat, as if a ball was forcing it's way up; a dif-

ficulty of breathing threatening suffocation; loss of voice, and a fainting fit, in which the patient seems to be in a profound sleep, and can scarce be discovered to breathe, the belly is swelled, the navel drawn inward, and an universal chillness and shivering affects the whole frame.

But both the approach and the decline of the fit are accompanied with a variety of other symptoms; such as a frequent discharge of very pale and clear urine, anxiety, palpitation of the heart, general tremor, low and unequal pulse, coldness in the extremities, a pale or fallow countenance, impaired sight and hearing, twitches, convulsions, alternate fits of laughing, crying, and sobbing; deep sighs, oppression, low spirits, involuntary tears, and sometimes sickness, vomiting, and incapability of retaining food or liquids on the stomach: and however dangerous the patient's situation may appear during the continuance of the paroxysm, yet as soon as it goes off all complaints vanish with it, and the patient remains in apparent health till another attack.

These complaints are seldom fatal, except they are succeeded by epilepsy or apoplexy; yet it is necessary to attempt removing the causes of them, as they become more obstinate at every return, and at length attain such a degree of strength

as to bring on a total relaxation, and render the cure extremely difficult, if not wholly impracticable.

When the patient is of a strong and robust habit, and where the pulse is full, it may be necessary to bleed; but weak and delicate constitutions, which are generally the subjects of these complaints, will not endure this evacuation, and more especially where the disorder is rooted in the habit, and by long continuance and frequency hath considerably reduced the patient's strength: in such cases, if the suffocations are violent, and the patient is young and vigorous, it will be adviseable to hold pungent acids, such as strong vinegar or the like, under the nose; but in tender habits, burning feathers, or applying volatile spirits or salts to the nostrils, will be more proper. If the fit continues long, the belly and limbs should be rubbed, and hot bricks or bladders of warm water applied to the soles of the feet; or the feet and legs should, if possible, be placed in a warm bath.

As soon as the patient is recovered from the fit, a clyster of the infusion of camomile flowers, with a spoonful of common salt, and a few grains of asafœtida, should be administered; and in case of costiveness, small doses of the sacred tincture, or Rufus's pills, with any of the foetid gums, may be given occasionally.

Where the stomach appears to be loaded with phlegm, it should be discharged by the help of gentle emetics; but these should be cautiously prescribed, as a too frequent or violent use of this evacuation may weaken the stomach too much, and rather increase than relieve the hysteric complaints.

The following medicines may be adapted to the various cases as they occur, and may serve to abate the irritability of the nervous system.

Take asafœtida and camphire, of each one dram—of musk, one dram and half—of liquid laudanum, thirty drops—of balsamic

syrup, enough to make the whole into pills, of which five may be taken twice a day.

Take Rufus's pills, gum pills, and salt of steel, of each half a dram—of juniper oil, fifteen drops—of the syrup of orange rinds, enough to bring the ingredients to a proper consistence for pills, four of which of a moderate size may be taken morning and night.

Take of the common bitter infusion, one ounce and half—of chalybeat wine, half an ounce—of compound spirit of lavender, two scruples. Make a draught, to be repeated twice a day.

Take of the extract of Peruvian bark, half a dram—colcothar of vitriol, and filings of steel, of each twenty-five grains—of the aromatic species, ten grains—of simple syrup, as much as will make a bolus. To be taken night and morning.

Take of conserve of sea wormwood, one ounce—of the flowers of steel, three drams—of the powdered flowers of cuckow-pint, one ounce and half—of syrup of orange rind, as much as will make the whole into an electuary, of which the quantity of a nutmeg may be taken twice a day.

The foetid volatile spirit, with an equal quantity of the paregoric elixir, may also be given occasionally, in quantities from thirty to sixty drops, in a glass of wine and water or any other suitable vehicle; or a tea-cupful of the infusion of the bark, with fifteen or twenty drops of the elixir of vitriol, may be taken two or three times a day.

Opiates may be administered, but with caution, and generally joined with volatile and foetid medicines; if opium disagrees with the stomach, it may be used in clysters, or externally, as we have already directed in treating of spasmodic disorders: some advise the use of castor with the opium, and the application of the following anti-hysteric plaster to the lower part of the belly.

Take

Take of pure galbanum, half a pound—purified asafoetida, and yellow wax, of each three ounces—of white resin, one ounce and half. Melt together over a gentle fire, and stir it well.

Issues, setons, and other drains, have been found useful: and the chalybeate waters of the Spa, Pyrmont, Bath, Tunbridge, and Islington, have been recommended as extremely salutary, accompanied with pills of asafoetida; and cold bathing is unquestionably of great importance.

But however immediate or temporary relief may be obtained from medicine, it is from regimen that we are to expect a perfect and compleat cure: exercise, air, a due regulation of the passions as far as human frailty will admit, and temperance and moderation in diet, are the grand specifics in these, as well as in most other chronic complaints. If the appetite is pampered with rich and high-sauced viands, or the stomach over-loaded with heavy and indigestive food; if the nerves are deluged with torrents of warm water, in tea or other weak and vapid fluids; or the blood is inflamed with copious draughts of spirituous and inflammatory liquors; it cannot be wondered that the whole frame should be disordered, and that the effects of practices so totally inconsistent with the regular performance of the animal functions, should not only shew themselves in the diseases incident to constitutions so vitiated, but in the thousand nameless complaints which constitute the tribe of hysteric disorders.

If, in the intervals of hysteric fits, the patient should be tormented with cramps in the limbs, as is sometimes the case, the external use of opium, and bathing the affected parts in warm water, will in general give relief; when the spasms are violent, and the remissions short, it may be necessary to apply blisters to the seat of the complaint; but this should only be tried where the patient is robust and sanguine; in delicate habits it will be more safe to rely

on the antispasmodic medicines above prescribed, and warm bathing, with the application of ligatures and bandages to the parts.

In ordinary cases the application of Hungary water, and the holding a roll of brimstone in the hand, have been frequently found effectual to remove the complaint.

Hypochondriac disorders are generally denominated *vapours*, or the *spleen*; and are in some circumstances so similar to hysteric complaints, that the diseases are frequently confounded, though they differ widely, and require in many instances very different treatment. Hypochondriac complaints, like most others in which the nerves are affected, attack the delicate and tender habit, the sedentary and the studious, the indolent and the unhappy; after the patient has suffered two or three returns of this disease it becomes inveterate, and is rarely so cured as not to be again excited by any of the causes which first occasioned it.

These complaints may be either constitutional or accidental; in the former case a dark or fallow complexion indicates a disposition to them, and they frequently occur when no particular cause can be easily assigned.

The accidental causes may be the irregularity or excess of any of the passions of the mind, and particularly those which prey on the spirits, as grief, regret, or disappointment: fixed attention on literary subjects, earnest pursuits of discoveries or improvements in arts or sciences, solitude, want of sleep, or too great indulgence in lying a-bed, will in some instances produce this disease, which may also be occasioned by improper diet, suppression of usual evacuations, whether natural or artificial, or too profuse a discharge of them, the repulsion of eruptions of any kind from the skin, internal obstructions, and, in general, whatever gives rise to other nervous disorders.

To describe all the symptoms of the hypochondriac disease, would be to enumerate

rate the signs of almost all the disorders which affect the human frame; there is scarce a complaint made in any species of indisposition, but what at some time occurs in that of which we now treat: the most general signs are an unconquerable inactivity of the body, affecting the mind so as to render the spirits dejected, and the thoughts despondent, producing horrible apprehensions of improbable evils, and raising up fantastic ideas of unfounded fears, and dangers which have no existence; and depriving the body of it's strength, and the soul of it's vigour and firmness.

This disease also shews itself in costiveness, a slowness and difficulty of breathing, flatulencies in the first passages, a cough, pale and crude urine, and spasmodic pains in the head, breast, and other seats of the nerves.

It is unnecessary to go over again the ground we have so often travelled in our directions and injunctions respecting regimen in nervous cases; nor will our readers require to be so frequently reminded, that prudence and temperance in the choice and quantity of their food and liquors, a due regard to the use of exercise, and taking it in a proper air, and a well regulated temperament of disposition, are more essential to the cure of these complaints than prescriptions of medicine: and, for a reason obvious to every understanding, regimen applies to all habits and constitutions; but in disorders of various and doubtful appearance, the effect of physic is uncertain. If the cause and nature of the complaint have been truly discovered, medicine may contribute to remove it; but where the possibility of an erroneous judgment exists in so high a degree, it cannot at all times be depended on.

Yet when we deliver rules for regimen, and offer regulations in the several articles of which it is composed, we are aware of the difficulties we encounter. In some instances the ungovernable appetites, desires, and inclinations of man, oppose themselves

to our opinion and advice, and render our best concerted precepts vain and useless; in other cases circumstances and situations present the possibility of their being complied with, and the unhappy patient sees the road to health before him without the means of pursuing his journey; and in others, a complication of disorders distracts both the sufferer and his medical advisers with fears, lest the management which would ensure the cure of one disease, should prove prejudicial or fatal in another.

Still more arduous is the task of confining within due bounds the turbulent passions of the soul, or bringing back and restraining in proper limits, wayward, wandering, or misguided reason. The paroxysms of rage will treat with contempt the warnings of the physician, the pangs of grief be deaf to admonition, and a perverted understanding will turn aside from argument, nor listen to the powers of conviction.

But notwithstanding these various repulses, it is our duty to return to the charge. Our business is to point out the possible means of preserving and restoring health; and as this great art depends so much on mental and corporeal regimen, we must repeat the precept, if it should not be generally attended to, or cannot be strictly observed; lamenting the cases of obstinacy and incapacity, and consoling ourselves with the hope, that if some of our readers cannot, and some will not listen to our advice, there are others whose pliant dispositions, and easy situations, will enable them to derive from it all the advantage intended.

Persons who are afflicted with hypochondriac complaints, are advised to a light animal food, and to the use of wine or spirits diluted with water, or Pyrmont water, as common drinks; riding is recommended as the best exercise, and where that cannot be used, the flesh-brush, and rubbing with coarse cloths or flannels, must be

be substituted: cold bathing is in all cases of advantage; and change of air, or rather of objects, will assist in shaking off this tedious malady, and for this purpose journies, voyages, and public amusements, are prescribed.

In the early stages of these disorders, an emetic of the milder kind will be serviceable, and may be repeated two or three times at proper intervals; after which gentle purges of Rufus's pills, or the sacred tincture, will be necessary; and the body should be kept open during the whole course of the disease by lesser doses of the same medicines, or by saline purges, according to circumstances.

After evacuations the following prescriptions may take place.

Take of the simple bitter infusion, one ounce and half—the aromatic tincture, and chalybeat wine, of each one dram. Make a draught, to be taken twice a day, about noon and in the middle of the afternoon.

Or, take of the simple bitter infusion, one ounce and half—of salt of wormwood, one scruple—of tincture of steel in spirit of sea salt, thirty drops. Make a draught, to be taken as the foregoing.

Or, take of the gummous pill, one dram—of Rufus's pill, one scruple—of salt of steel, half a scruple—of simple syrup, enough to make the ingredients into eighteen pills, of which three must be taken every night, and the use of them continued at least two months.

Or, take of the decoction of bark, one ounce and half—of simple tincture of valerian, two drams—of tincture of steel in spirits of sea salt, twenty drops. Make a draught, to be taken twice or three times a day.

If the pulse should be quick, and the heat of the body indicate a disposition to fever,

the several preparations of steel should be omitted, and the decoction of the bark, with the addition of a small quantity of the elixir of vitriol, in the proportion of twenty drops of the latter to a tea-cupful of the former, should be taken twice a day.

If pains in the stomach and windy complaints are accompanied with head-ache, the following medicine may be serviceable.

Take of the foetid volatile spirit, half an ounce—of the paregoric elixir, two drams. Mix, and take thirty or forty drops frequently in a glass of Pyrmont water.

If the symptoms should become so violent as to produce convulsions or spasms, a few drops of liquid laudanum may be taken in a glass of peppermint water; or the following—

Take of asafoetida, one scruple—of musk, six grains—of liquid laudanum, ten drops—of simple syrup, as much as will make a bolus. To be taken as occasion may require.

The following tincture is also recommended to be taken daily, and the use of it continued for several weeks.

Take of the Peruvian bark powdered, two ounces—orange rind and gentian root, of each half an ounce. Infuse the whole six days in a quart of proof spirit. Filter it through a paper, and take from one spoonful to two, with the mixture of an equal quantity of water, in the morning, and about seven in the evening.

This medicine must also be persisted in; and if the use of it is accompanied with the chalybeat waters and cold bathing, it may probably be attended with greater advantage.

C H A P. XXIII.

Of Blindness, and the Disorders of the Eyes.

OF all the organs of the human body, the eye seems to be the most valuable; of all the senses, the sight appears to be the most useful: deprived of this blessing, we lose at least half the comforts and enjoyments of life, and are cut off from participating the choicest dispensations of Providence.

Yet notwithstanding the high estimation in which we affect to hold the enjoyment of this faculty, and the energy with which all mankind join in deploring the loss of it, either in themselves or others; and notwithstanding, from the peculiar delicacy with which this organ is constructed, it is not only subject to more diseases than any other part of the human frame, and from the same circumstances the violence of those diseases is irrecoverably fatal; yet are we too apt to treat lightly complaints of the eyes, and to depend for cures on nostrums, recommended in such a way as would not procure the smallest degree of credit with us in other maladies.

Nor is this the only neglect of which men are guilty with respect to the invaluable organs of sight: those who are born blind, or by any accident become so, are frequently suffered to languish through life in all the horrors of a state of darkness, without a single effort to afford relief, or even an examination into the nature of an obstruction which might possibly yield to some remedy, application, or operation.

Diseases of the eye may be occasioned by a variety of different causes: long and unremitting attention to objects situate much above the sight, or to such as are placed so low as to require a constant inclination of the head to peruse or survey them; by fixing the sight on such objects as

reflect the light too strongly on it; and by reading, writing, or working a great deal, by candle-light. They may also arise from accidental causes, such as blows, wounds, burns, or other external injuries; or from the smoke, vapours, or effluvia, of acrid or volatile matter. The eye may be injured by other diseases, such as small-pox, measles, and the like; or disorders in this part may be brought on by violent continued headaches; excessive use of bitter or mercurial medicines; by the stoppage of evacuations, and particularly those of blood; by excessive changes from heat to cold; and by impropriety or excess in food and liquors.

Of *inflammations in the eyes* we have already treated; and the various other diseases which affect them are to be the subjects of this chapter.

That disorder which is called by the Latins *gutta serena*, and from the Greek *amaurosis*, is a decay or total loss of sight, when no other faulty appearance is discoverable in the eye than the enlargement of the pupil.

The *gutta serena* hath been distinguished into *perfect*, *imperfect*, and *periodical* kinds: the first, when the loss of sight is total; the second, when it is only so far impaired as that a power remains of distinguishing light from darkness; and the third, which attacks instantaneously, continues hours or days, and then goes off, but returns again at intervals, like fits of hysterics or hypochondria.

The causes may be a palsy in the optic nerve, proceeding probably from a slight apoplexy; a tumor, or extraordinary fullness of the adjacent vessels; a translation of diseased matter from some other part to the optic nerve; or venereal or rheumatic humours falling on the eye: this disorder may

may also be occasioned by hysteric and other nervous symptoms; by several of the causes above mentioned; or by an unusual and improper contraction or dilatation of the *iris*, or that floating part of the eye, the powers of which serve to admit or exclude the rays of light; or by whatever other cause obstructs or intercepts the nervous influence in the eye. The periodical blindness, which we have described as one of the species of the *gutta serena*, may possibly be produced by that branch of an artery which enters the eye being distended, and pressing upon the optic nerve.

Those of phlegmatic or general bad habits, the aged, those whose nerves are naturally weak or have been rendered so by hardships or excesses, and persons who labour under obstructions or irregularity of periodical or other discharges, are commonly the subjects of this disease.

If the nerve is wasted or decayed, if the patient is aged or very infirm, or if the blindness is the consequence of a fever, little hope can be formed of a cure; and when the sight of one eye goes off, that of the other soon follows: but if the attack is slight, and the sight only impaired; if it arises from a compression of the nerves by the fulness of the vessels; if it is occasioned by humours falling on the eye, or hath succeeded the measles or small-pox; if the habit of body is robust, or the patient a girl whose periodical discharges have not yet appeared; we may flatter ourselves with the expectations of removing the disorder. The periodical kind in most cases will yield to proper management.

The symptoms of this disease are, that the pupil of the eye appears either larger or less than it's usual size, and neither contracts nor dilates when exposed to a considerable degree of light. It's approach is frequently accompanied with head-ache; and as that pain abates, this disorder of the eye increases; though in some instances the patient becomes totally blind without

any preceding indisposition; and when it comes on in this way, if only one eye is affected, the defect is not perceivable unless the other is closed, and then the pupil of the diseased eye will be observed to dilate if exposed to a strong light, when in the performance of it's natural functions it would immediately contract itself; and as soon as the sound eye is opened again, the diseased pupil returns to it's ordinary dimensions: in some cases the pupils of a new-born infant have no movement, though they appear of the natural size, and they continue in this state months before they can see. When this disorder is periodical, and proceeds from pregnancy, the suppression of periodical evacuations, or from diseases of the nerves, it is sometimes preceded by violent head-ache, giddiness, drowsiness, and noise in the ears.

If the patient is of a strong and robust habit, and his vessels full of blood, it may be necessary to bleed freely; if the fulness is of the humours, purges and diuretics will be more proper, together with the application of blisters, which must be placed high if they are laid on the nape of the neck, but will be more efficacious if they are applied behind the ears.

In cold phlegmatic habits, and when the cause is suspected to be either rheumatism or a palsy in the optic nerve, a blister may be placed on the forehead; and equal quantities of the bark and valerian root powdered may be taken night and morning, in as large doses as the stomach will bear, washing down each dose with a tea-cupful of rosemary or sage tea, with forty drops of the tincture of foot mixed in it.

The bowels must be kept in a laxative state by small quantities of calomel, given with proper doses of Rufus's pill, or other aloetic purgatives, or by mild mercurial pills of the following composition.

Take the common mercurial pill, and powdered rhubarb, of each equal quantities—
5 A simple

simple syrup, enough to bring these ingredients to a proper consistence for pills, which should be made of a moderate size, and one, two, or three, taken occasionally, so as to keep the body open.

The mercurial pills may be made as follows.

Take quicksilver and honey, both purified, of each two drams—of the crumb of bread, half an ounce. Grind the quicksilver and honey together till the globules disappear, adding occasionally a little of the simple syrup; then rub in the bread with a quantity of water, to bring the mass to a proper consistence, which will make one hundred and twelve pills.

If the cause of this disorder should be the suppression of any evacuations, endeavours should be used to restore them; and in all cases issues, setons, and continued blisters, will be serviceable.

In slight cases benefit hath been derived from rubbing the forehead twice a day with the volatile liniment, and keeping a flannel dipped in it constantly to that part of the head; though a blister is in general more effectual.

Cupping and scarifying the head hath been also said to be in some cases successful; and if the eyes are supposed to be affected by the repulsion of morbid matter from the skin, opening medicines and gentle perspiratives may be used to advantage.

Such substances as promote sneezing are also recommended, and for this purpose two or three grains of the resin of guaiacum may be snuffed up the nose, which will also excite a considerable discharge; or any of the volatile alkaline spirits may be used, being first properly diluted.

The steams of hot spirits of wine, or of coffee, passed to the diseased eye through a funnel two or three times a day, have sometimes effected a cure, accompanied with

repeated purges, and a strict attention to regimen.

And indeed great regard is due to the patient's food and liquors, in whatever degree he is affected by this disorder, or whatever means are used to effect his recovery; the former should be light and cooling, the latter, water with a toast, whey, table-beer, or weak wine and water: spirituous liquors should by no means be admitted.

If all the above prescriptions should fail to remove this disorder, a salivation may be tried, which has sometimes succeeded in cases which have appeared to be desperate; though perhaps the following solution, continued for two or three months, may answer the same purpose, and it is certainly less dangerous and disagreeable.

Take of the white corrosive mercury, eight grains: dissolve in a pint of French brandy. Let the patient take a table-spoonful of it, night and morning, in half a pint of the decoction of sarsaparilla.

The *albugo*, *leucoma*, or white speck on the eye, may be occasioned by violent inflammations; by abscesses in the cornea, or first coat of the eye; by the small-pox or measles; by burns or wounds; and not unfrequently by an imprudent use of vitriolic collyriums, or eye-waters.

When these specks are deeply seated, they are cured with difficulty; when they are produced by burns or wounds, or the use of vitriol, they are very seldom removed; and when the shape of the eye seems altered by them, the case is equally dangerous: the specks which succeed inflammations sometimes vanish spontaneously.

When they happen after eruptive diseases or inflammations, no time should be lost in attempting to remove them; to this end bleeding, blistering, and purging, with diuretics and a low diet, are recommended. The variety of astringent and corrosive powders which have been prescribed for this disorder

disorder are in a great measure pernicious; but the fumes of coffee, of decoction of the woods, or of camphorated spirits of wine, may be received into the eye through a funnel with considerable hope of success: this method, however, generally excites some degree of inflammation, which must be removed in the usual way as speedily as possible. The juice of celandine, the gall of an eel or pike, or of a partridge, or the oil of box, are also recommended for the removal of specks on the eye; if either of these prove too sharp, it may be diluted with a thin solution of gum dragon in water: these applications to the eye should not be repeated oftener than once in twenty-four hours; and half an hour after either of these remedies hath been used, the eye should be well washed with warm water, in which a few drops of brandy have been mixed. Common glass, very finely powdered, hath also been sometimes blown into the eye through a quill, for the purpose of taking off these specks; but it should never be attempted where there is the least degree of inflammation, nor unless the film be remarkably thick and tough; and even in that case it should not be used above once in eight and forty hours.

A *catarrh*, is when the chrystalline humour of the eye becomes opaque, or loses it's transparency, so that the rays of light are prevented from passing to the inner surface of this organ.

At the commencement of this disorder, the patient complains of a diminution of sight, and on a very accurate inspection of the eye, a whiteness may be discovered very deep within it; and as the patient loses by sensible but slow degrees the benefit of sight, the whiteness or opacity becomes gradually more and more perceivable.

In recent cases it may not be improper to try such medicines as have been prescribed for the relief of the *gutta serena*; and poultices of fresh hemlock have been recommended to be applied to the eye, with

a continued blister on the back, and a constant use of the mercurials directed in that case.

But no medicines have yet been discovered which may be relied on for the removal of this disorder. The operations of depressing or extracting the chrystalline humour have alone been found effectual to recover the sight, obstructed by the defect in the transparency of this part of the eye.

There is also a species of blindness which is called *nyctalops*, or night blindness, in which the patient's sight gradually goes off towards the approach of night, and he remains blind till the morning, when the sight returns and continues all day.

This is considered as an intermitting disorder, and may be also termed a periodical blindness; the free and continued use of the Peruvian bark generally affords relief in these cases.

Bloodshot-eyes are in most instances occasioned by external injuries, such as blows or bruises, or by violent bodily exertions, and straining in coughing, or vomiting, lifting great weights, or the like; and the appearance is at first in spots of a lively red colour, which afterwards become livid or blackish.

When this disorder is violent and obstinate, bleeding may be necessary; but it may in most cases be removed by fomenting the eyes with the infusion or decoction of elder flowers and roses, or by poultices of red roses, boiled in milk and laid over the eye.

Weeping eyes, or those which are troubled with a perpetual defluxion of watery humours, occasioned by a weakness of the glands in those organs, or by a particular relaxation, may find relief in the vitriolic collyrium, applied with caution; or by the use of Hungary water or other spirits, diluted so as not to bring on inflammation, or to occasion violent pain: blisters, opening medicines, and bathing the extremities, may also prove useful, by drawing off and discharging

charging the humours which offend the eye.

Shortness of sight, and *distant vision*, can hardly be considered as disorders, proceeding generally from original defects in the structure of the eye, and therefore not admitting any assistance from medicine or skill, except where those complaints have taken place suddenly or come on gradually after any acute disease, or in consequence of debility of constitution; in which cases they may be considered as nervous disorders, and treated accordingly.

Squinting may be a habit contracted by imitating or mocking others; or it may be occasioned by viewing or endeavouring to view many pleasing objects at once, or by placing an infant so that the light of the window, candle, or fire, may fall obliquely on it's eyes: it may also proceed from some fault or defect in the conformation of these organs, or of some particular parts of them; the weakness of one eye may occasion this defect in the other; the muscles may be relaxed or contracted in an extraordinary

degree; or it may be produced by a tumor in the orbit or socket of the eye, by an adhesion of the eye to any part of the eyelid, or from spasms, apoplexies, palsies, or epilepsies.

Those whose squinting has been brought on by accident after they are grown up, see the objects they look at double, which is not the case when the defect is in the construction of the eye.

Attempts have been made to remove this defect in children, by obliging them to look at their faces in a looking-glass for a quarter of an hour at a time every night and morning, washing the eyes with diluted Hungary water, and bathing the temples and forehead three times a day with water to strengthen the muscles; but this defect is much more easily prevented than cured, and it behoves parents to be extremely careful not to permit their children to converse with those who squint, as there is hardly a habit more apt to be acquired if they have familiar communication with persons whose eyes are distorted either by custom or infirmity..

C H A P. XXIV.

Of Deafness, and Disorders affecting the Ear.

IF the enjoyment of sight is one of the greatest of earthly blessings, that of hearing is next in importance; he who is deprived of this faculty, loses a principal share of the benefits of society, being cut off from that communication which constitutes so large a portion of human happiness, and being condemned to eternal solitude in the busiest scenes of the universe.

Deafness, or a *defect in hearing*, may be occasioned by external wounds or injuries; by wax or any foreign matter accidentally stopping the external ear; by the mem-

brane of the drum of the ear being ruptured or relaxed; by palsy, or extraordinary pressure on the auditory nerve; by violent noise; by a defluxion of humours on that part, or by too great dryness; or by cold, inflammation, or abscess.

Deafness may also arise from a defect in the original conformation of the ear, or may be produced by weakness of the nerves, or by the gradual and universal decay usually attendant on old age.

When deafness proceeds from the last mentioned cause, or from external injuries, there

there can be no expectation of cure; and when the defect is in the structure, it is equally beyond the reach of art.

But when it is caused by hardened wax, or any accidental stoppage, the former may be relieved by frequent injections of warm water, or milk and water, a little sweet oil having been previously dropped on the wax to soften it; the latter must be carefully removed by proper instruments.

Hardened wax may also be discharged by softening it with the following drops, and afterwards syringing the ear with a decoction of the flowers of sage and rosemary.

Take of the oil of sweet almonds, two drams
—compound spirit of lavender, and tincture of castor, of each one dram. Shake them well together.

After the wax has been brought off, a little wool, moistened with the same drops, and worn for some time in the ear, will prevent it from hardening again.

The following prescription hath also been recommended for the same purpose.

Take the oil of sweet almonds, and opodeldoc, or the saponaceous liniment, of each two drams. Mix them well together. Drop a small quantity into the diseased ear at bed-time, and stop it with a little wool or cotton.

If the deafness is occasioned by a relaxation of the membrane, a little brandy or spirit of rosemary, warmed, may be now and then dropped into the ear; and such medicines as excite sneezing have sometimes produced very good effects, when the cause of the complaint hath been undiscoverable.

When it arises from a cold in the head, a flannel night-cap is recommended; the patient should also be particularly careful not to get wet in his feet, to keep those extremities warm by woollen stockings, and to bathe them frequently in warm water, and

especially at going to bed: mild purges are also of great use, where there is any appearance of inflammation.

If the deafness is occasioned by a defluxion of humours, the following injection may be used night and morning.

Take of the extract of lead, twenty-five drops
—of camphorated spirits of wine, fifty drops
—of water, half a pint. Shake the whole well together before it is used.

But in these cases, issues, perpetual blisters, and other occasional drains, made as near the part as convenient, will in general answer the purpose more effectually, by drawing off the redundant moisture.

A bit of fat bacon, put into the ear, is said to answer the purposes of softening the wax; but care should be taken that it is not thrust too far in, nor pressed too tight; in either of which cases, it may probably do more harm than good.

Electricity hath been mentioned as a cure for confirmed deafness; if this is tried, the shock should be gentle, and received as near the ear as is consistent with safety.

A variety of other prescriptions for this complaint may be found, as well in the writings of physicians, as in the mouths of nurses and other notable people; but we are of opinion that the applications to this delicate organ should be made as seldom as possible, and with the utmost caution. For the satisfaction of such as wish to know what has been usually done in such cases, we subjoin the following, though we rather advise warmth than the very best of them, as we apprehend deafness of any kind more likely to be removed by this means than any medical help that can possibly be given.

Take twenty drops of the gall of an eel, the like quantity of spirits of wine, and two drams of water. Mix well together, and drop three or four drops into the diseased ear at bed time, stopping it well with wool or cotton, and keeping the head warm.

Put a grain or two of musk into the ear, with cotton or wool.

Put a small quantity of salt into the ear, or drop into it half a tea-spoonful of sea water, or a solution of common salt in water.

Drop a few drops of the juice of ground-ivy into the ear, or three or four drops of the juice of an onion, at bed-time, stopping the ear.

Skin a clove of garlick, dip it in honey, and put it into the ear at bed-time, stopping it with black wool. Lie with that ear uppermost: the next night make the same application to the other ear, and continue it to each alternately for a week.

Next in order to the senses of seeing and hearing, are those of taste and smell; that of the touch is the last, though it appears to be nearly of equal importance with the other two.

A depraved or vitiated *taste*, and a defective *smell*, are so generally occasioned by luxury, excess, or ill habits and customs, that they can no more be deemed diseases, than the giddiness occasioned by excessive drinking, or the fulness of stomach which is the natural consequence of gluttony.

High and seasoned dishes, aromatics, spices, and strong liquors, will effectually spoil the taste; and want of cleanliness about the teeth, gums, and indeed the whole mouth, will at least occasion a temporary suspension of this distinguishing faculty: diseases of various kinds produce nauseous and disagreeable tastes in the mouth, but they chiefly arise from acid or acrid humours in the stomach, and when these are corrected the consequence will be no longer troublesome.

Injuries received in the nervous parts of the tongue and palate may totally destroy the powers of taste; and pimples, warts, or other eruptions, may deprive the little eminences, which are discovered like a roughness on the farthest part of the tongue, and

which are the medium of taste, of their nice and delicate sensibility. And defluxions, occasioned by violent colds, may likewise contribute to blunt those acute sensations, which occasion the little prominences that constitute this apparent roughness, to meet and receive whatever is offered to the taste.

It has been said that the taste generally determines what aliment is salutary, and that for the most part whatever offends the taste is injurious to the stomach: but should this opinion be admitted in the extent, we apprehend it would be extremely difficult to determine that any single article of food is wholesome, or the contrary; as it is well known that the same flavour does not please or displease all persons alike, or even the same persons at different times.

The taste which is depraved by high feeding or excess, may be restored by the use of a plain diet, and the observance of moderation and temperance. A bad taste, arising from a disordered stomach, as we have already observed, will vanish when the cause is removed: when the nerves which furnish the organs of taste are weakened or relaxed, stimulatives, such as mustard or horse-radish, will give relief; but where those nerves are destroyed, or have received material injury from wounds or the like, this sense is in all probability irrecoverably lost.

The sense of *smelling* may also be materially affected by the continual application of fragrant or volatile odours; snuff is destructive of this faculty, and those who frequently use a smelling-bottle, destroy, by degrees, the sensibility of the olfactory nerves.

The smell may also be diminished by disorders affecting the membrane which lines the nostrils, and by which the odorous effluvia contained in the air, and attracted through the nostrils, are communicated to the olfactory nerves; by a defect in the structure of the brain, where these nerves originate, or of the spongy bones of the upper jaw; but the loss of smell much more frequently

frequently happens from accidental and acquired, than from natural causes.

Defluxions, occasioned by colds or other disorders of the head, injure the sense of smelling whilst they continue; but being removed, this faculty is speedily restored: when the mucus is too thick, or dries up in the nostrils, the smell will be obstructed; but this complaint may be relieved by such medicines as excite sneezing, or by receiving acid steams into the mouth and nostrils.

Tumors in the nose are sometimes troublesome and painful; poultices applied without, and the steam of warm water received into the nostril, will accelerate the suppuration; the ulcers may be dressed with any emollient ointment, which must be melted and snuffed up the nostrils, if the part affected is beyond the reach of ordinary application: where these ulcers are of the venereal kind, mercurials will be necessary, and the solution of white corrosive mercury in brandy, as directed in the gutta serena, may be used both as an internal medicine, and to wash the sores.

If the nerves on which the organs of smell depend appear to be affected with weakness or inactivity, they may be stimulated by smelling to mustard, horse-radish, or volatile salts; or sneezing may be excited by snuffs, or by the solution of vitriol, which we have heretofore prescribed for that purpose.

The sense of *touching* is that perception which affects the mind when any external body is applied to the skin, but more especially at the ends of the fingers, which are furnished with nerves by which the tangible qualities of things are more accurately distinguished than by other parts of the body.

This sense may be impaired by obstructions of the nervous influence, and the loss or diminution of it may be considered as a species of palsy or apoplexy, and should be treated accordingly. A torpor, numbness, or insensibility of touch, in other parts of the body, may be relieved by such medicines and applications as have been prescribed in other nervous cases affecting the members of the body externally.

CHAP. XXV.

Of Melancholy, or Melancholy Madness.

MELANCHOLY is a tedious and obstinate distemper, in which the patient continues delirious without a fever, his mind being alienated from that regularity and firmness, which enabled him to enjoy the comforts and perform the duties of life, and his thoughts fixed almost continually upon one and the same idea.

The causes of *melancholy* may be intense application of the mind to any particular object; violent passions of the mind, whether excited by circumstances of grief or joy, or produced by love, resentment, pride, or disappointment; and gloomy

or desponding thoughts, or misconceived ideas in religious matters; than which nothing is so likely to make strong and lasting impressions. This disorder may also be occasioned by excessive labour or violent exercise, especially under an exposure to the sun, or in a dry, hot, and sultry air; by excess in the indulgence of venereal pleasures; by extremes of heat and cold, or sudden changes from the one to the other; by a sedentary, inactive, and solitary life; by hard, dry, and indigestive food, particularly such animal flesh as is salted and dried in the smoke; bread and other preparations of meal.

meal not properly fermented, and crude and unripe fruits; by large draughts of weak or watery liquors, or by an improper quantity of spirits and other strong drinks; by medicines of too astringent quality, or operating too violently; or by slow, soporiferous, and stupifying poisons. This disorder may also be produced by the suppression or diminution of customary evacuations of any kind; by excessive cold or wet in the extremities, driving too great a quantity of blood into the brain; or by the brain itself becoming too dry, or the integuments hard or callous: it may also succeed fevers and other acute disorders, or such eruptive diseases as have been incautiously and imprudently repelled.

The symptoms of approaching melancholy, are want of sleep, unusual timidity, and strange apprehensions of danger; the belly is bound, the urine pale, and discharged in small quantities, and the bowels and stomach troubled with wind; the complexion alters, first growing pale, and then turning yellow, fallow, brown, and even livid, and in some instances spread with spots of different appearances; the pulse becomes languid, the breathing slow and difficult, the circulation through the finer vessels is impaired, so that the secretions are diminished, the blood thickened, and the discharge of the humours lessened; the appetite fails, and the patient loses his flesh, and feels a decay of strength.

The perversion of the mind betrays itself in fretfulness, desire of solitude, and impatience of disturbance; the passions are suddenly excited, and the smallest disappointments produce sourness, anger, or vexation; the inclinations are fickle, and perpetually varying, so that what the patient earnestly enquires after one moment, he totally disregards the next; and those things which were most pleasing to him in health, are now the most disagreeable: yet, amidst all these inconsistencies, and with an aversion to motion and exercise

which appears to be almost unconquerable, he follows some certain object with unremitting and laborious constancy; and this assiduity is sometimes exerted in the imaginary pursuits of knowledge and science, and sometimes in the preservation of his person, which he at one time apprehends to be metamorphosed into a beast of the chase actually worried by hounds; and at another believes it is converted to a tea-pot or some other brittle vessel, which runs the momentary hazard of being dashed in a thousand pieces.

If the disorder is hereditary, or is occasioned by disappointed love, ambition, or other inquietude of mind, it is removed with extreme difficulty; when it proceeds from accidental bodily infirmities, such as suppression of evacuations, colds, fevers, or the like, a cure may be expected: casual discharges of blood from the nose or hæmorrhoidal vessels, and the return of obstructed periodical evacuations, in some cases give relief; and a cure is sometimes obtained unexpectedly by the breaking out of eruptions on the skin, or boils on different parts of the body; and in some instances the disease is carried off by a diarrhœa, after it has continued so long as to bring the patient's life into danger.

The food should be light and nourishing; all those kinds which we have before described, as having a tendency to promote this disease, being carefully avoided; the drink may be whey, water, or teas of herbs sweetened with honey, and thin wort or small-beer before it has undergone fermentation; all ripe fruits may be eaten freely, and the juices of them mixed with water, and sweetened with honey, will make an agreeable and wholesome drink: the patient should abstain from wine and spirits of every kind, and from all food and liquors, in the composition of which, spices and other matters of a heating quality are included.

Constant but moderate exercise will very much

much assist the cure; riding or walking, as much as the patient can well bear without incurring great fatigue, will not only remove obstructions, but promote that discharge by perspiration which is in this case so necessary and salutary: some advise digging in a garden; but we apprehend this is an employment, which not affording variety or change of objects, is unfit for persons of melancholy dispositions, more especially as it tends to indulge the propensity to solitude which so generally attends this disease.

Indeed our first and chief attention must be paid to the patient's mind, which must be soothed and quieted by every species of indulgence; it is not enough that neither his inclinations or opinions must be opposed, but the former must be gratified as far as possible, and every thing that is beyond our reach, or improper, promised at some future period. It is in vain to combat the absurd propositions of the melancholy patient with reason or argument; they should therefore be always admitted till an opportunity offers of practical conviction: the patient who conceived his legs were glass, was cured of this imagination and his disorder, by a blow on the legs from an impatient and impertinent servant; and the artist, who believed his bones were all softened to wax, got rid of his opinion and the disease, by the sagacity of his physician, who humoured his conceit, and promised to restore them to hardness in a certain number of days, in the course of which he gradually admitted the patient to the use of his limbs, under an idea that the cure proceeded thus progressively.

When the the patient's mind is soothed or flattered into any degree of attention, amusements and diversions must be thrown in his way as if by accident; he may be decoyed to a public place under the pretence of finding some object of which his mind is in search, or induced to take a journey to gratify some imaginary pursuit:

but all his amusements must be perpetually varied; whatever the mind in this state dwells long upon will feed the disease, and even music, with all it's soothing powers and charms, may be continued so long, or repeated so often, as to nourish that melancholy which it is expected to remove.

The patient should, if possible, breathe a light and temperate air, and for this purpose a removal to the continent hath been recommended; and where circumstances admit of this expedient, the voyage and variety of objects may possibly contribute as much to the cure as the warmth or temperature of the climate.

Sleep is of great importance, and when it can be procured without medicine, the patient may be indulged in it, with great hope that the suspension of those anxious meditations which so much perplex his waking thoughts, and the opportunity given for all the juices of the body to pass easily through the vessels and recruit the wasted humours, will produce happy effects.

Warm bathing, very frequently repeated, and drains of all kinds, but particularly a seton in the back, will be of considerable use; if blisters are applied, they should be continued, and the discharge promoted by proper dressings; and issues may be kept open with little balls or peas of the root of orris, and covered with plasters of the mild blistering ointment.

If the patient is young and of a robust and sanguine habit, the first step to be taken towards a cure is bleeding; and this operation must be repeated, and such quantities of blood taken away, as the patient's strength and pulse direct.

Clysters of the emollient kind may also be frequently administered, and the body must be kept open by manna, cream of tartar, rhubarb, or the following mixture.

Take of the infusion of senna, three ounces
—of soluble tartar, two drams. Mix, and give three table-spoonfuls occasionally.

Emetics are also of great service, but the efficacy and operation of them will depend on their being rather stronger than usual.

After proper drains have been made, and the above evacuations have taken place, any of the following medicines may be tried; but it will be right to continue such of them as are thought suitable to the case for some time, before the hopes of success are given up, as neither of them can be expected to act immediately in the removal of this obstinate malady.

Take of musk, one scruple—*asafoetida* and camphire, of each two scruples—of liquid laudanum, thirty drops—of simple syrup, as much as will make these ingredients into twenty pills, of which five may be taken morning and night, with the following draught.

Take of water, one ounce and half—of diuretic salt, half a dram—of balsamic syrup, one dram. Make a draught, to be repeated as above; and to that which is taken at night add from fifteen to twenty drops of liquid laudanum.

Or, take of gum sagapen, one scruple—of tincture of myrrh, enough to make it into three pills. To be taken every night, and continued a month, drinking after it one

of the above draughts. Five grains of rhubarb, or two of aloes, may be added to the pills occasionally, if the patient should be costive.

The sweet spirit of nitre may be given in the patient's common drink; or purified nitre to the quantity of one dram and half, or two drams in twenty-four hours, may be given in three or four different doses, in any way that it can be best got down; or nitre and camphire may be taken in the following form.

Take of camphire, from eight grains to twelve, according to circumstances—of nitre, from one scruple to half a dram. Make a bolus with simple syrup, to be taken twice a day.

Or if this medicine offends the stomach—

Take of nitre, from one scruple to half a dram—*asafoetida* and Russian castor, of each one scruple—of simple syrup, enough to make a bolus. To be taken as above.

Distilled vinegar is said to be an excellent remedy in melancholy cases, and is advised to be mixed with the patient's common drinks, in such proportions as that an ounce or an ounce and half may be taken every twenty-four hours.

CHAP. XXVI.

Of Madness.

OF *delirium*, *phrenzy*, and *symptomatic madness*, we have already treated under the various diseases to which they are severally incident. The *madness* which we are now to consider, is a chronic disease, and is frequently the melancholy which we have last described, increased to such a height as to produce that species of insanity which is called a *mania*, or raving madness.

This disease differs only in the degree from melancholy, of which it is generally the offspring; and arising from the same causes, is denoted by nearly the same symptoms in a state of aggravation.

The preceding signs are in general an inflammatory appearance or redness in the eyes; a trembling of the eye-lids; a total change of behaviour and disposition; a pride

pride, which discovers itself in the voice, gesture, and countenance, and in boasting speeches of accumulated wealth, rank, or power; in a fixed and uncommon hatred to particular persons, and frequently to near relations, and those who have been before highest in the patient's esteem; broken interrupted sleep, and sometimes a total discontinuance of rest; a violent head-ache, unusual quickness of hearing, a noise or ringing in the ears, an immense degree of strength in the muscles, a capacity of bearing intense cold: in women an apparent accumulation of blood in the breasts; a wonderful endurance of hunger and pain; dreadful imaginations, with strange gesticulations; perpetual talking without the least coherence; and cries and howlings like those of dogs, wolves, or other wild beasts.

In the height of this dreadful disease, the patients sometimes wander far from their habitations, and shunning the sight of men, betake themselves to solitude, and refuse to hold any conversation with mankind, or even to answer questions; some tear and mangle their bodies, and others imagine they perceive red images before their eyes, and think themselves struck with lightning.

It has been observed, that madness sometimes remits for a considerable time, but returns periodically about the times it first appeared; and that those raving fits, which seem by their periodical returns to be governed by the moon, are generally accompanied with epileptic symptoms.

After all other remedies have been tried in vain, this distemper hath been relieved by other disorders attended with large evacuations, or in which the secretions are considerable; as varices, or preternatural distension of parts of the veins, spontaneous fluxes of blood, piles, dysenteries, dropsies, and even by the attacks of agues where the sweats have been long and profuse.

For the cure of this degree of madness,

the evacuations prescribed in cases of melancholy are not only necessary, but require to be increased in frequency and violence of operation: bleeding, emetics, such purges as have been directed in that disease, and diuretics, warm baths, and drains, with the liberal use of camphire, musk, and nitre, and after the evacuations opiates, are recommended as the probable means of cure.

The antimonial wine, or emetic tartar, is generally given in these cases to excite vomiting; but should these fail of success, which sometimes happens, from one table-spoonful to two of the juice of assarabacca, or groundsel, may be given; the flowers of antimony have also been celebrated as a specific.

Bathing in cold water, pouring water on the head, and covering it with wet cloths, have been recommended, and even in desperate cases immersing the patient in the sea, and keeping him as long under water as is consistent with the safety of his life, is said to have been in some instances successfully tried.

If a low and diluting diet is necessary, when the patient labours under that kind of insanity which shews itself in melancholy, it must be still more essential in that degree of the disorder in which the patient raves and is furious; indeed, the same regimen in all respects, except an increased strictness, will be required in the state of this disease of which we now treat.

It may be necessary to observe, that every kind of madness being attended with a decreased perspiration, the custom of confining these patients in close apartments augments this obstruction; they should therefore, in all possible cases, be left at liberty to use such exercise as may promote a discharge so very essential to the abatement of the violent symptoms, and to the hope or prospect of a cure.

Nor can we omit to remark, that severity in beating, chaining, and terrifying, is seldom necessary, and never in any degree of violence.

violence: madness is always accompanied with timidity, and after the most frantic have felt a few instances of smart, rather than severity, they may in general be very easily governed.

There is also another species of insanity, accompanied with less violent symptoms, which usually comes on after the body has been much weakened and exhausted by au-

tumnal intermitting fevers, by excessive and repeated bleedings, or by violent discharges from the bowels.

In these cases evacuations are said to be pernicious, and the hopes of cure are placed, in the use of a nourishing restorative diet, with the occasional administration of cordial and corroborant medicines.

CHAP. XXVII.

Of the Bites of Dogs and other Animals in a State of Madness; and of the Hydrophobia, or Dread of Water.

THE *hydrophobia* has been held to be a symptom of the bite of mad animals, and that this kind of madness belongs properly to the canine species, which are described to be dogs, foxes, and wolves; but it does not always attend the bites of these animals, nor is it peculiar to those of the canine race, as we shall prove in the sequel of this chapter, unless it should be taken for granted, that whenever it appears after the bites of other animals, it has been inflicted on them by those of the dog kind.

This country not being infested with wolves, and no instances of mischief done by mad foxes having come to our knowledge, we shall confine ourselves at present to that disease which is occasioned by the bite of a mad dog.

The hydrophobia is allowed to be a nervous disorder, though it is accompanied with inflammatory symptoms; it is generally distinguished into the silent or dumb, and raving madness; and is said to take either appearance from the state of the animal from which the infection was received; though instances are related, in which it hath assumed both at intervals, or periodically.

The principal seat of this disorder seems to be either the stomach, or the adjacent parts, though some are of opinion that it is in the *par vagum*, or those nerves which are interspersed in the stomach, as most of the symptoms appear about this part of the body.

It has been said that in order to communicate the infection, a wound is no more necessary than in the small-pox, and that the smallest quantity of saliva, either fresh or dry, produces this disease: the infection may, it is said, lay dormant for many months, but it seems to be the more general opinion that it commonly appears in three or four weeks; and if no symptoms of the disease are manifested in six weeks, the patient need not be under the least apprehension of any ill consequences.

The material cause of this disorder seems to be an irritation of those particular nerves which are the seat of the complaint; and it has been observed, that the nearer the bite is to the salivary glands, the sooner the symptoms appear.

The signs of madness in a dog are described as follows: he becomes solitary and dull, avoids those with whom he is accustomed

omed to be familiar, and his companions of his own species, and endeavours to hide himself; he seldom barks, but makes a kind of howling or murmuring noise, refusing at the same time all kinds of meat and drink; he seems particularly enraged, and flies at strangers, but in this first stage appears to recollect and regard his master; he hangs down his head, ears, and tail, and nods when he walks as if he was overpowered with sleep; and in this state of the disease, though his bite is dangerous, it is less so than afterwards. As the disorder increases, the dog begins to pant, he breathes short and hard, hangs his tongue out of his mouth, from which he emits great quantities of froth, and keeps it constantly open; sometimes he moves slowly, as if he was half asleep, and then of a sudden runs violently, though not always directly forward, according to the common opinion; at length he forgets his master; his eyes look languid, dull, red and watery; his tongue is of a livid or lead colour; he is of a sudden exhausted, becomes faint and weak, and falls down; then rises again, flies at every thing, and grows furiously mad: this stage seldom continues above thirty hours, during which time his bite is said to be incurable. A few hours before his death, he becomes silent and still, and at last generally dies in convulsions.

To these symptoms may be added the following, which are considered as infallible proofs of the animal's madness: all other dogs will avoid the dog which is mad, or approaching to madness, and run from him with horror; they will also refuse any piece of raw flesh which the distempered dog hath touched with his tongue or mouth; the tone of the dog's voice when he barks is hoarse and hollow; and, if he is confined in that species of this disease, which, though very improperly, is termed the *dumb madness*, he barks incessantly for a day or two.

Such are the general signs of madness in

these animals, the original causes of which have never yet been discovered, or even enquired after; though, if we may venture to risque an opinion on this subject, we shall attribute it to those acts of cruelty so frequently and wantonly committed on a faithful, useful, and inoffensive animal, whose sagacity, docility, and affection to the human race, should protect him from outrages which are too often practised, even in the streets of the metropolis, to the disgrace of the perpetrators, the dishonour of civil policy, and the disgust and horror of every being who is not totally divested of the principles of tenderness and humanity.

From the barbarous treatment to which these animals are too often exposed, it is easy to conceive madness may sometimes proceed; but it is still more frequently productive of consequences, which, though not actually of a nature altogether so fatal, are yet of importance enough to destroy the peace and disturb the quiet of individuals; and if they do not occasion the dreaded malady, may give birth to others, which, though not so immediately alarming, may in the event prove distressing and dangerous.

When the wretched creature has escaped the fury of his original tormentors, worried, affrighted, bruised, wounded, and perhaps mutilated, his appearance betrays many of the symptoms which we have marked as the signs of madness: a dog in this condition attracts the notice, but seldom engages the pity, of those who meet him in his flight; the cry of a mad dog is given out, and he undergoes a second persecution, which ends but with his life; assaulted on all sides, he attacks his assailants in his turn, or fastens on the first passenger that comes within his reach. The dog is destroyed, so that no observations can be made on his condition; the wounded person is said to have received the bite of a mad dog, undergoes all the horrors of

apprehension, and all the operations of medicine; and in consequence of a received, though very mistaken idea, that the disease may appear at any distant period, passes through his life in a state of uneasiness, which may in all probability contribute to shorten it: and we had once an opportunity of observing the distress into which a circumstance of this kind plunged a whole family, who had taken a journey of fifty miles to bring a deserving young woman to be dipped in salt water at a village on the Severn, whose apprehensions of this disease had arisen from a bite received in the finger from a hog which she was feeding, and which had been some months before bitten by a dog supposed to be mad; for, on enquiry, it appeared, that this animal had been killed immediately after he had wounded the hog, and the latter being also destroyed the moment he had injured the young woman, no opportunity offered for discovering whether the dog had ever been infected with madness, or whether the outrage committed by the other animal was occasioned by hunger or distemper.

That the case we have represented is by no means uncommon, will be universally admitted; how much, then, is to be lamented, that an evil pregnant with so much mischief should pass unheeded, and the application of remedies be deemed either unworthy the attention of the legislature, or beneath the dignity of law.

When this disorder hath unhappily been communicated to any of the human species, though some variations may be observed in particular cases, the general symptoms are a slight pain in the wound, sometimes accompanied with itching, but always resembling rheumatism, extending also to the neighbouring parts, and at length passing from the extremities to the bowels and other intestines; the scar, if there hath been a wound, begins to swell, becomes inflamed, and at last discharges a

thin watery humour, and this is considered as an invariable mark of an approaching hydrophobia; there are also other pains of the same kind, which are quick, shifting, and convulsive, and affect the patient in the neck, joints, and other parts of the body: sometimes a dulness and sense of pain seizes at once the head, neck, breast, belly, and even seems to run through the back-bone; and, as the disorder increases, the patient complains that the same kind of pain shoots from the arms towards the breast and heart.

Besides these symptoms, a weariness, pain in the head, and giddiness, come on; the patient grows gloomy, murmurs, and is forgetful and drowsy; sometimes his mind seems disordered, he is seized with fits of unprovoked anger, his rest is disturbed with frightful dreams, he awakes agitated and confused, and convulsions immediately follow; his hearing is impaired, the eyes red and watery, the aspect melancholy, the face pale or fallow, and the features shrunk or contracted; a sweat breaks out about the temples, and a dryness about the entrance of the throat; and a foul tongue and foetid breath are accompanied with an unusual discharge of saliva or spittle.

From the beginning of the complaints there is a peculiar weight and stricture on the breast, a difficulty, and as it were struggling for breath, deep sighs, a nausea, and disposition to vomit; and this oppression of the breast is one of the constant symptoms of this disorder, beginning, increasing, and ending with it.

We have now described the first stage of this deplorable disease, the continuance of which varies with different patients: as these symptoms are aggravated, the second stage advances, in which a fever sometimes comes on, attended with momentary horrors; but in some instances this fever is mild, and in others it does not occur; the incapability of sleeping becomes continual, the disturbance of the mind increases, a delirium

delirium approaches, with an aversion to all fluids and polished bodies. The hydrophobia now draws on, and the presages of that dreadful symptom are, a constriction of the gullet, and a difficulty of swallowing; hitherto liquids are received freely, but they are soon after refused, and this symptom is augmented so visibly, that the patient is seized with horror at the sight of any liquid, and an attempt to drink produces spasms, which are followed by anxiety and loss of the senses; the moment the surface of the liquor is touched, a strangulation is felt in the throat, the stomach is blown up, and the larynx, or upper part of the windpipe, swells externally of a sudden, and as suddenly falls: though the passage of liquids is thus obstructed, yet for some time solids continue to be swallowed with tolerable ease; but at length this symptom frequently becomes so violent, as to prevent solids from passing as well as fluids.

Some of the unfortunate sufferers in this cruel disease are so exquisitely sensible, that they are offended even by the air, if it does but reach the skin from a distant window or door; the light grows troublesome, and the least motion, or the most trifling noise, is insufferable.

The patient's sighs are now changed to a constant murmur, interrupted only at times by louder exclamations of grief; he ceases to recollect his most intimate friends and acquaintance, and attempts to bite those who come within his reach; but his reason returns at intervals, and he laments, in terms of inconceivable horror and distress, his own wretched situation; his thirst now grows intolerable, yet he attempts in vain to drink, and sinks into a despondency truly affecting; conscious of the danger to which his friends and attendants must be exposed from his efforts to bite in the deprivation of his reason, he exhorts them to consult their own safety, and with inex-

pressible anguish of mind, advises them to leave him to his miserable fate.

Towards the conclusion of this melancholy scene, the fever and thirst are augmented; the urine is sharp, corrosive, and foetid, though discharged in small quantities; the patient foams at the mouth, and hangs out his tongue; his pulse throbs and becomes convulsive; his strength is exhausted, cold sweats appear, the tightness and oppression of the breast is highly aggravated, and he expires in spasms or convulsions.

It has been remarked, that the infection is communicated in this disease in the same manner as the small-pox by inoculation: in the latter case, if no inflammation appears about the places of insertion, no eruption is produced; and the bite of a mad dog, though it sometimes heals soon after it is inflicted, constantly grows inflamed, and breaks out afresh before the approach of any of the symptoms of madness.

This disorder appears to be nervous, from all the principal signs, and in particular from the flying pains, the tightness of the breast, the difficulty of swallowing, the dread of water, and the extreme sensibility of air, motion, or noise; and a cure can only be expected from the same means as are used to destroy the spasmodic irritation in other nervous disorders, or the peculiar acrimony which occasions it.

To prevent the fatal effects of bites from mad animals, the following medicines and treatment are recommended.

Let the part be immediately cupped and scarified, the wound dilated, or even a portion of the surrounding flesh cut off; after which it should be washed, both immediately, and daily during the cure, with water, vinegar, and salt, and such dressings applied as will keep it open and promote a discharge; some blood may also be taken from the arm.

The

The patient should then take the following medicine.

Take of *ash-coloured ground liverwort*, carefully cleaned, dried, and powdered, half an ounce—of black pepper finely powdered, a quarter of an ounce. Mix these together, and divide the whole into four doses, one to be taken every morning of four successive days, in half a pint of warm milk from the cow.

After these four doses have been taken, the patient must go into a cold bath, or cold spring or river, every morning fasting, for a full month; his head must be immersed as well as his body and limbs, and he should be careful not to continue in the water, if it is cold, above half a minute after the total immersion.

The following is commonly called the *East India Specific*, and is by some esteemed infallible in the prevention of this disease.

Take native *cinnabar*, and factitious *cinnabar*, of each twenty-four grains—of *musk*, sixteen grains. Let these be finely powdered, and taken in a glass of brandy or arrack.

If no symptom appears of approaching madness, this medicine need not be repeated till the end of a month; but if any indisposition should occur, it must be given again at the expiration of three hours.

Some prefer the following prescriptions after a mercurial emetic.

Take of *musk*, sixteen grains—of factitious *cinnabar* levigated, half a dram—of the saponaceous pill, eight grains—of *camphire*, six grains—of *balsam of Peru*, enough to make a bolus. To be taken at night.

The next morning a purging potion may be given of the following composition.

Take of the infusion of *fenna*, three ounces—of tincture of *fenna*, half an ounce—of *Glauber's purging salts*, three drams—of

solutive syrup, two drams. Mix for a draught.

In the evening after this purge, or on the succeeding morning, the patient is directed to bathe either in the sea or a cold bath; after which he is to be rubbed dry and put to bed, and the musk bolus again administered, with half a pint of the infusion of *valerian* and *sassafras*, encouraging a copious sweating with plentiful and frequent draughts of small white wine whey; and this course is to be continued four, five, six, or seven succeeding nights and days, in proportion to the state of the animal by which the wound was given, and repeated three or four times at the two next changes of the moon.

The following medicines are also prescribed as antispasmodics.

Take of *camphire*, seven grains—of *asafoetida*, ten grains—of *Virginian snake-root* powdered, half a dram—of *syrup of saffron*, enough to make a bolus. To be repeated daily.

Or, take of purified *nitre*, two drams—of *camphire*, half a dram—of *Virginian snake-root* powdered, one dram. Rub the whole together, and divide it into five doses, to be taken as above.

A dram of the mercurial ointment is also recommended to be rubbed into the parts about the wound every day; but the use of this, as well as the foregoing medicines, must be continued for a considerable time, in order to produce the effect desired: nor do we apprehend either of the first mentioned prescriptions will answer the purposes of prevention effectually, unless they are repeated more frequently, and used for a much longer time, than is usually directed. If this disease is universally allowed to arise from an irritation of the nerves, relief ought not to be expected more speedily than in nervous complaints of

of a much less violent nature; nor can it be reasonably conceived but that the preventive medicines will require time for operation, proportioned to that allowed to remedies applied for a cure.

The yellow emetic mercury, or Turbith's mineral, hath been recommended as a preservative against the effects of the bites of mad animals, used either in quantities to bring on vomiting, or in smaller doses to act as an alterative; and the strong mercurial ointment, gradually rubbed in so as to excite a moderate salivation, hath, it is said, been successfully tried.

But whatever means are pursued to prevent this dreadful malady, a regard to regimen is necessary; all hard, dry, and heating food, and inflammatory liquors of every kind, are to be avoided with extreme care; diluting liquors, acidulated with vinegar, may be taken in considerable quantities.

In all probability, if proper means of prevention were used in time, and persevered in, instances of canine madness would be less frequent; but the pretended infallibility of a dip or two in the sea, and the supposed efficacy of certain specifics, which having been tried on persons who probably had never received the infection, have acquired the reputation of preventing the disease, prove in many instances extremely injurious, by inducing those who are in danger of the disorder to rely on these remedies without having recourse to such as might produce the happy effects which are in vain expected from the others.

In case the symptoms of approaching hydrophobia should appear before the patient has had assistance, opium and musk are said to be the medicines which are principally to be relied on; of the former the quantity of a grain, or even a grain and half, is to be given every three hours, or as soon as the effect of the former dose seems to have ceased; musk, to the amount of fifteen or twenty grains, may also be administered every six or eight hours; sponges

dipped in vinegar should be frequently applied to the mouth and nostrils, and a piece of flannel wetted with the following liquor to the throat.

Take of liquid laudanum, two ounces—of camphire, one dram. Mix them well together.

The following method of cure hath also been prescribed by a very learned and ingenious medical writer.

Let a considerable quantity of blood be taken away, and the operation be repeated twice, thrice, or even four times, according to circumstances.

The patient should be put, if possible, into a warm bath, and this at least twice in the twenty-four hours.

Emollient clysters should also be injected two or three times every day.

The wound, and the parts adjoining, should be rubbed daily with the mercurial ointment.

The whole limb on which the wound has been inflicted should be rubbed with olive oil, and wrapped in flannels which have been dipped in it.

Every three hours a dose of the powders, which we have described as the East India Specific, should be given in a tea-cupful of the infusion of elder flowers, or of those of the lime tree.

The following bolus is to be given at night, and repeated in the morning, if the patient is not perfectly easy, washing it down with a tea-cupful of the last mentioned infusion.

Take of Virginian snake-root powdered, one dram—camphire and asafoetida, of each ten grains—of opium, one grain—of conserve or rob of elder, sufficient to make a bolus.

If the patient complains of nausea at the stomach, and a bitterness in the mouth, thirty-five or forty grains of the powder of ipecacuanha may be taken as an emetic.

If he takes any food, it should be extremely

tremely light; such as panada, or soups of mealy or farinaceous vegetables.

And if after recovery the patient should continue weak, or subject to terrors, he may take half a dram of the powder of Peruvian bark daily.

But though we appear to treat with contempt the chimerical idea, that a single immersion in the sea is sufficient to carry off infection actually received, and that nothing more is necessary to ward off the dangers incurred by the bites of mad animals; yet we do not mean to discountenance rational endeavours to avoid the fatal effects of them by a regular course of sea-bathing, accompanied with proper medicines; on the contrary, we are inclined to believe, that such a measure may contribute in no inconsiderable degree to the prevention of fatal consequences from such accidents.

The practices of keeping the patient under water till he had lost his senses, of terrifying his mind by the representation of some fictitious danger, and then throwing him headlong into the sea, and other experiments of a like nature, so frequently tried, and so confidently relied on, about the beginning of the present century, seem at present to have lost their credit; no good reason could ever be assigned, why nerves, already too much irritated, should receive the additional shock of terror or apprehension; and yet those who recommend such method of violence, seriously assert, that these immersions cure rather by disturbing the spirits, than by any virtue of the salt-water.

The actual cautery, or burning the part with a red hot iron, is also at present out of use, notwithstanding we are of opinion that arguments could be urged in support of this practice, much more rational than those which have been advanced in favour of exciting terror in the patient, or keeping him under water till he is more than half drowned; though we are aware very specious ones in behalf of the former may

be drawn from the alteration the passions of the mind are supposed to make in the fluid of the nerves and arteries.

We shall conclude this chapter with some short extracts from a case published among the posthumous works of a late justly celebrated physician; and as this case arose from the bite of a cat, it will serve to shew that the species of madness which occasions a dread of liquids, is not confined to animals of the canine kind.

ON the fourteenth of February, the maid servant of a respectable tradesman having occasion to wash, rose earlier than usual; upon her entering the wash-house she was attacked by a cat, which fixed upon her leg: upon her screaming, her master came to her assistance, and aiming a blow at the cat which missed it, the animal seized his leg, but he soon disengaged himself; and a chairman, who was passing by, being called in, she was immediately killed.

Both the master and servant took the Ormskirk medicine: the wound which the former had received soon healed; but that of the maid servant grew so troublesome, that she got admittance into an hospital, where it was cured, and she remained in perfect health at the end of four or five months.

But, about the middle of the following month of April, the master complained of a pain in his right-knee, and supposing it to be rheumatic, took some medicines from his apothecary for that complaint; but finding, after using them about six days, some very extraordinary symptoms, such as a titillation in the urethra, a contraction of the private parts, and emissions after making water, to which he had frequent calls, the medicines were discontinued, and he was advised to live in all respects as temperately as possible.

On Thursday the sixteenth of June, after a restless night, he found great difficulty in swallowing his tea, though he eat his bread
and

and butter as usual; at this time he had no other appearance of indisposition than a little paleness, and appeared chearful, without discovering any uneasiness or anxiety. He complained of having sweated a great deal in the night, and being extremely faint with it; said he had also been thirsty in the night, but having attempted, in the presence of his physician, to drink a dish of tea, he brought it within a few inches of his lips with great composure, and then threw the liquor into his mouth, and swallowed it with uncommon haste and perturbation; observing, at the same time, that he could force it down, and asking if it must be repeated frequently, or if he might be allowed to omit it a while.

He was desired to forbear the attempt while it continued to affect him with such uneasiness, but to endeavour to get down bread, moistened with any liquid he chose, as often as possible; and accordingly he swallowed bits of bread dipped in wine without much difficulty, both then and frequently during the same day, and this was the only nourishment he took.

The patient's aspect varied frequently, his pulse was rather quicker than the standard of health, and somewhat hard, but changed almost every minute both in frequency and hardness; his flesh felt moderate, his tongue dry, he made very little urine, and complained much of the contraction; the emissions had almost ceased, and his bowels had been emptied the preceding morning.

At this time he was ordered to lose six ounces of blood, and to take a scruple of native cinnabar, and half a scruple of musk in a bolus, every four hours, and to get down as much fruit or other nourishment as possible.

During the course of the day, besides the bread moistened with wine, he swallowed some strawberries and a few bits of pudding, but did not endeavour to drink: about five in the afternoon he was requested

to attempt swallowing a little liquid, and it being brought to him, he threw it hastily into his mouth, and got it down with extreme difficulty and perturbation; the moment it touched the gullet, all the muscles concerned in swallowing appeared to be convulsed.

At this time his countenance was grown more pale, and he seemed much agitated and distressed; complained of extreme thirst, and of the impossibility of swallowing any liquid; his tongue was white, but did not appear dry, and he was perpetually making efforts to discharge a viscid tenacious phlegm which lined the *fauces*, or entrance of the throat; the heat of his flesh was moderate; his pulse quick, hard, and irregular; and he had strong palpitations of the heart.

He was at this time perfectly sensible, and when his endeavours to discharge the phlegm would allow him to speak, gave pertinent answers. He had made but little urine since the morning, complained of the disagreeable sensation in the scrotum; which, as well as the emission, still continued.

The blood which was taken away in the morning had some slight appearance of inflammation; the *crassamentum*, or solid part, was firm, with slight traces of size; but the *serum*, or fluid part, was remarkably yellow. He had no evacuation by stool this day, and upon the whole his disorder had apparently increased since the morning.

A laxative clyster was ordered, and he was directed to be carried to a warm bath, and to remain in it as long, and in such degree of warmth, as was agreeable to him; and after he had bathed, clysters of milk and water were to be repeated as often as they could be administered with convenience, in the last of which a dram of Dover's powder was ordered to be given.

The patient was also directed to rub two drams of strong mercurial ointment on his legs and thighs as soon as he returned from

from the bath, and to get down as much sustenance as he could.

These injunctions were followed, the laxative clyster produced a proper effect, and the warm bath relieved him whilst he continued in it; but all the symptoms returned with increased violence in the night, which he passed totally without sleep, and in much agitation, not being able to lie still a single moment.

In the morning of the seventeenth his countenance bespoke great distress, though he endeavoured to conceal it; he was sometimes calm, and at others agitated, and talked much but sensibly: he had now a copious flow of less viscid spittle; his tongue was white and moist, but foul; his pulse quick, small, hard, and irregular; his hands rather cold than hot; he had made water with less difficulty, and without the usual consequence; and the pain in the scrotum was gone off.

He was now ordered to be bled standing, according to his strength, to be put again into the warm bath, and continued in it as long as was agreeable to him; the milk clysters, with Dover's powders and the mercurial unction, were directed to be repeated; and a scruple of opium was ordered to be made into twenty pills, three to be given when the patient came out of the bath, and two every hour till he seemed disposed to sleep.

At five in the afternoon of this day he had followed the last mentioned prescriptions, except taking the pills; and conceiving he had received much benefit from the warm bath, entertained great hopes of a speedy recovery.

But a vast quantity of viscid phlegm was now continually flowing into his mouth, which he was as constantly employed in discharging, as it seemed to have the same effects upon the organs of swallowing, as if he attempted to get down any other liquor, and gave him extreme uneasiness: to get rid of this defluxion, the moment he felt

it at the entrance of the throat, he exerted a sudden and vehement expiration, as if with a design to blow away the moisture, so offensive to him, with the utmost force and expedition; and these efforts occasioned a sound not very remote from the hollow barking of a dog.

When he was not thus employed, he talked constantly but coherently; his eyes had a particular keenness, and all his motions were quick and vehement; his pulse was also quick, hard, and sometimes trembling and irregular; his hands were cold and clammy, but the general heat of his body temperate.

Attempting to be shaved, every application of the lather and razor gave him great emotion, and every movement excited some degree of agitation and anxiety.

Whilst he was in the bath, the person who attended him poured some of the water on his head and face; and though this at first distressed him, yet he at length so far conquered his aversion to it, as to pour water on himself in the same manner.

After repeatedly expressing the satisfaction he had received from the warm bath, he desired to go into it again; which being assented to, he entered it with increased difficulty and seeming reluctance, and remained in it near half an hour: about nine o'clock he was brought home; after this he refused to take the pills, or any other medicine; grew fretful, restless, and delirious, but offered no violence; and after remaining in this condition about two hours, he reclined his head gently on the pillow and expired.

When the patient was bathing, attempts were made to discover the condition of the part which had been bitten, but ineffectually; after his death it was examined with attention, but no morbid appearance was perceivable.

From this case some observations will naturally arise on this dreadful malady and the treatment of it.

It

It is apparent, that the Ormskirk medicine is not always taken with success as an antidote to this species of poison: but of this celebrated remedy more will be said when we treat of it among other popular medicines.

The necessity of dilating the wound on all occasions is evident, as to this circumstance was most probably owing the safety of the maid servant, who was wounded at the same time with her unfortunate master.

It appears that musk and cinnabar were administered in this case, but not in the quantities prescribed in the East India prescription; those medicines therefore were not tried.

No efforts were made to prevail on the patient to take opium in the early stages of his illness, or to convey it into his bowels

by clyster, when it became troublesome to him to swallow any thing; nor does it appear that any attempt was made to convey in this way any other sustenance besides milk and water, or even medicine, except a dram or two of Dover's powder, into the patient's intestines.

No endeavours were used to conquer the aversion to water, or to reconcile the patient to the use of fluids; or any means tried to promote the discharge of the phlegm which gave him so much uneasiness.

Upon the whole, from the circumstances of this case, no conclusions can be drawn of the inefficacy of any of the prescriptions which have been offered for the cure of this deplorable disease; the rise, progress, and symptoms of which, are however very accurately described.

C H A P. XXVIII.

Of the Bites and Stings of Poisonous Reptiles and Insects.

OF these, the bites of adders have been so notorious for their venom, that in the earlier ages they were held sacred as the ministers of divine wrath; and in more enlightened times, the figure of a viper was added to the statues or busts of eminent physicians, as an acknowledgment of that skill which could avert the dangers apprehended from the bites of these reptiles.

The symptoms which follow the *bite of a viper*, when either one or both it's greater teeth have fastened on any part of the human body, are an acute pain in the place wounded, with a swelling, which is at first red, but afterwards grows livid, and by degrees spreads to the neighbouring parts, and occasions great faintness; a quick, but low and sometimes interrupted pulse; great sickness at the stomach, with bilious

convulsive vomitings; cold sweats, and in some instances pains about the navel; and without speedy assistance death ensues, unless the strength of nature should prove sufficient to repel the poison from the vitals; and even in that case the swelling continues some time, and not unfrequently increases after the abatement of the other symptoms: little pustules frequently appear about the wound, from which a thin acrid humour sometimes flows. In general the colour of the whole skin changes and turns yellow, as if the patient was affected with the jaundice.

Though these circumstances may vary, and be more or less aggravated in different climates and seasons of the year, and according as the size and strength of the animal itself enabled it to communicate a greater or less proportion of the venom;

yet the symptoms are nearly of the same appearance, unless the bite should happen to be unaccompanied with the effusion of that liquor by which the whole disorder is occasioned.

Nor are these creatures supplied with this deadly fluid for the purpose of being mischievous to man; on the contrary, it is provided to answer a purpose useful to the human race, and absolutely necessary to the existence of the animal itself.

Vipers feed upon frogs, toads, mice, moles, and other small animals, the increase of which would be troublesome and injurious to mankind; but being unprovided with teeth fit to chew this food, they swallow it whole, where it lies in the stomach; or, if that should not be large enough to contain it, partly in the throat, till it is gradually dissolved into a fluid fit for the nourishment of their bodies; but this manner of feeding requires, that the prey taken for this purpose should be immediately killed, and the force of the stomach being unequal to this task, the fangs and the poisonous fluid contained beneath them are provided for this end; nor are they ever employed to any other use, except the viper be provoked by pain or fear, to apply them as weapons of defence against the attacks of men or other animals.

The fangs are in number one, two, or three, on each side, besides smaller ones, which are intended to supply the place of the larger, if these should fall out, or be taken away by any accident; these great fangs are hollow till within a certain distance of the point, and at the termination of the cavity there is a small slit, like that in a pen, which is the outlet or passage for the poison.

This liquor is separated from the blood by glands, which running towards the roots of the fangs, discharge it into a bag, which lies there, and through which the poisonous teeth seem to pass; and on any attempt to

bite, this fluid is, by the contraction of the fibres in opening the mouth, and by the pressure of the root of the tooth when the extremity has seized the prey, forced into the cavity of the fang, and thence through the opening or slit into the wound which the point of it has inflicted.

The quantity so emitted seldom exceeds a single drop, and the structure of the parts which compose this poisonous fluid, as described by an accurate observer, will account for it's operation.

A drop of this matter being placed on a plate of glass, and examined with a microscope, exhibited nothing at the first inspection but a parcel of small salts, nimbly floating in the liquor; but in a short time the appearance was changed, and these saline particles seemed to be shot out into chrystals of incredible fineness and sharpness, with something like knots here and there, from whence they seemed to proceed; so that the whole texture represented a spider's web, but infinitely more fine and minute: and yet so well hardened were these little transparent darts, that they retained the same form upon the glass for several months.

The cure for the bite of a viper, is said to be the fat or grease of the same animal; but we apprehend olive oil, warmed and gently rubbed into the part, beginning the unction always above the wound, if it is in a limb, will more effectually answer the purpose: sucking out the poison from the wound was a practice of great antiquity, and hath again been recommended by some modern writers, though we do not see any necessity for imposing a task, at least very disagreeable, on the friends or attendants of the injured person, when it is universally admitted, that the simple remedy we have already prescribed is sufficiently efficacious to preserve his life from the smallest risque or danger, and in general to effect the cure without the intervention of any other assistance.

But

But should the swelling continue, or be attended with any considerable degree of inflammation, the skin may be relaxed by emollient fomentations, and poultices of white bread, milk, and oil.

We are happily free from those poisonous insects, such as centipedes, scorpions, and the like, which infest warmer climates: the little injuries sustained from the stings of wasps and bees, may be relieved by a mixture of oil and vinegar, though some use honey for this purpose, and others parsley bruised, houseleek, rue, onions, or garlick.

Before we conclude this chapter, it may not be improper to mention the negro re-

medy for the bite of a rattle-snake, which may be of use to those who visit countries where this serpent is found.

Take of the roots of plantain and horehound, (if in the summer the roots and branches together) a sufficient quantity. Beat them in a mortar, and express the juice, of which give the wounded person a large table-spoonful as speedily as possible: if the patient is swelled, it must be forced down his throat. If this does not relieve, which is said to be seldom the case, give another spoonful about an hour after, which never fails; and apply a leaf of tobacco, moistened with rum, to the wound: if the roots of the herbs are dry, they must be moistened with water.

CH A P. XXIX.

Of Vegetable and Mineral Poisons.

THE plants of this climate, which are possessed of poisonous qualities, are principally *hemlock*, *hemlock dropwort*, *wolf's bane*, and *deadly nightshade*; to which may be added particular sorts of *mushrooms*.

The first of these plants has been sometimes eaten by mistake for parsley; the roots of the second for carrots; the third hath been accidentally mixed with sallad: the berries of the nightshade are temptations to children; and the difficulty, not to say impossibility, of distinguishing those mushrooms which are wholesome from the fungus of a poisonous quality, hath subjected many persons, who are disposed to gratify their appetites at the hazard of their healths, to the inconveniences which may follow the use of the latter instead of the former.

The following symptoms appeared in consequence of eating a small quantity of wolf's bane, and this account is nearly de-

scriptive of the effects produced by the other poisonous plants above mentioned.

A sensation of tingling heat in the tongue and jaws, so that the patient's teeth seemed to himself as if they were loose, and his face as if it was swelled; this tingling sensation, gradually spread over his whole body, particularly to the extremities; his knees and ancles lost their strength, and he had frequent twitchings of the tendons; sometimes he perceived a sensible check of the circulation through his limbs: at length he became giddy, a mist collected itself before his eyes, he complained of a humming noise in his ears; his senses failing, he fainted; his eyes and teeth were fixed, his nose was contracted, he breathed short and with difficulty, and cold clammy sweats broke out on his hands, feet, and forehead; and all these symptoms followed within two hours after eating the herb.

For the cure of poisons, occasioned by eating

eating either of these poisonous plants, an emetic should be immediately given; some recommend a solution of white vitriol for this purpose, and large quantities of warm water to work it off; but we apprehend milk, oil, and warm water, or any fat broths, would better answer this purpose; but these must be taken in large and frequent draughts, so that no part of the poisonous matter may remain on the stomach: if any medicine is necessary to excite vomiting, we would prefer the powder of ipecacuanha or oxymel, or vinegar of squills, to the solution of vitriol, which should only be used when the others do not succeed.

Clysters of oily composition should also be frequently administered, and the patient should continue for some time to drink freely of teas of the emollient herbs, or whey sweetened with honey, and with a mixture of distilled vinegar in every draught.

A late melancholy instance of the fatal effects of water distilled from the leaves of *laurel*, hath occasioned such enquiries into the qualities of this plant, as have determined it to be the most deadly of all the vegetable poisons which are produced in this island.

This plant was formerly used even for medicinal purposes, and the leaves of it have commonly been substituted for bitter almonds in making *satisfia*, and for the purposes of the kitchen, though it's baneful qualities seemed to be known by some botanical writers.

It appears, from the circumstance above alluded to, that the water distilled from the leaves of *laurel*, is a poison which operates with equal celerity and certainty, bringing on immediate spasms in the stomach, and fatal convulsions, in so short a space as an hour after it hath been swallowed.

Emetics, worked with oily mixtures, should be instantly administered; and as

soon as this evacuation hath been made, cordial medicines may succeed.

But it is to be hoped, no housewife will hereafter use the leaves of this plant in any preparation for the table; as the distillation of them could only be for purposes of iniquity, we trust no caution is necessary on that head.

Opium, taken in large and improper doses, either by accident or with a mischievous intent, produces, according to the quantity, either a moderate degree of mirth, resembling madness or inebriety, or else heaviness and stupidity; it also occasions giddiness, flushes, or a fixed red in the face; swelled lips, disagreeable dreams, startings, convulsions, cold sweats, a dilatation of the pupil of the eye, imperfect speech, a slow full pulse, quickness and difficulty of breathing, nausea, an itching in the skin, vomiting, hiccups, madness, and faintings, with cold sweats.

A vomit of ipecacuanha, squills, or the solution of white vitriol, to the quantity of half a dram, according to circumstances, should be immediately given, and worked off with considerable quantities of some of the oily liquids above prescribed, and these emetics should be repeated several times: if the patient be of a robust and vigorous habit, bleeding will be necessary, after which a table-spoonful of sharp vinegar should be given frequently; sinapisms may be also applied to the feet, and blisters to his arms; his body should be well rubbed, and shook, tossed, and moved about; if the inclination to stupefaction or sleepiness is prevalent, volatile spirits and other stimulatives should be applied to the nose; clysters of tobacco-smoke may also be frequently administered, and as soon as the patient is capable of swallowing, saline draughts, with salt of wormwood and fresh lemon-juice.

Nourishing food and cordials, or gentle purgatives, will be necessary, according to
the

the state of the patient's body, after recovery from the effects of this species of poison: if he continues low and weak, the former will be proper; but if there is any suspicion of inflammation in the stomach or other intestines, the latter with cooling medicines will be required.

Among the *mineral poisons*, *white arsenic* is the most powerful; and in describing the symptoms produced by this, we shall comprehend most, if not all those which are occasioned by others.

The first and immediate consequence of swallowing arsenic, is a dryness and inflammation of the throat, dejection, stupefaction, fainting, delirium, tremblings, convulsive spasms, palsy, thirst, and burning heat in the stomach; intolerable gripings, which, accompanied with violent hiccups and cold sweats, bring on vomitings of black matter, foetid stools, mortification of the stomach and bowels, and consequential death.

But besides the effect which arsenic produces in common with other poisons, it corrodes the coats of the stomach, perforates the intestines, and occasions swelling and mortification of the whole body, and a sudden putrefaction after death, particularly of the private parts.

When the effects of this poison do not prove fatal, tremors, palsies, epilepsies, and lingering hectic, are the usual consequences.

Emetics should be administered as speedily as possible, and repeated; and in this case the solution of white vitriol is to be preferred, because it's operation is more sharp and certain than either the powder of ipecacuanha or emetic wine, directing the patient to drink plentifully of oily broths, or oil with warm water, and injecting clysters of the like composition; the stomach and intestines should be filled with unctuous and emollient fluids, such as sweet oil, melted butter, chicken or veal broth, butter-milk, or new milk.

When evacuations of both kinds have

taken place freely, mucilages, and such demulcents as sheath the acrimony of the poison, will be proper; for this purpose gum Arabic may be dissolved in barley-water, and given as a drink or in clysters; in either of which may be also dissolved spermaceti, or the powder of gum tragacanth.

After the poison has been expelled, care must be taken to keep the patient's body open with manna, fenna, Glauber's salts, and the like gentle laxatives; and the patient's food for some time should consist of fat broths, compositions of milk, and other spoon-meats: his drink may be infusions of the mucilaginous herbs or linseed, or milk and water.

The following experiments with this fatal mineral drug, may serve to dispel doubts in cases of apprehended poisoning, or attempts to poison.

This species of arsenic is of a milky whiteness, gritty, and wholly insipid to the taste; when put into cold water, and the mixture stirred, a kind of film of a sulphureous appearance rises to the surface of the water, and continues there; but the greater part of the arsenic sinks to the bottom of the vessel, and remains undissolved.

If it is thrown on an iron heated red-hot, no flame appears, but the whole rises in thick white fumes, which have the smell of garlic; and if a plate of cold iron is held over these fumes, it will be covered with a white dust or flour.

If a quantity of arsenic is inclosed between two plates of copper, and the whole is heated red-hot in a fire, the copper will become white.

Boil five grains of white arsenic a few minutes in two ounces of water; filter it through paper, and divide it in five equal parts, in so many different glasses: into the first pour a few drops of the purified salt lye, which will produce a white cloud hanging somewhat above the middle of the liquid in the glass; to the second, add some

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drops of the spirit of sal ammoniac, and it will occasion a few particles of pale sediment; to the third, spirit of salt, which will precipitate a considerable quantity of a light-coloured substance; into the fourth, put some strong spirit of vitriol, which will occasion the like precipitation, but the substance will harden into glittering crystals, adhering to the sides and bottom of the glass; syrup of violets, mingled with the water, in the fifth glass, will tinge it of a beautiful pale green colour.

It must be observed, that these appearances will sometimes differ, according to the

quality of the mineral itself, or of the several matters directed to be added to the different glasses, which may be accidentally more or less strong or pure.

If *corrosive sublimate* should by any accident have been taken in dangerous or imprudent quantities, the best antidote is a weak solution of any mild alkaline salt, such as salt of tartar, salt of wormwood, or common pearl ashes, in the proportion of one ounce to a gallon of water; of this solution considerable quantities should be drank, which will destroy the *saline spicula*, or sharp points.

BOOK V.

Of Venereal Diseases.

IF the painful but necessary task we have now undertaken should require an apology; if the promulgation of rules for the management, and medicines for the cure of these diseases, should be considered as an encouragement to vice; or if it should be urged that the degree of shame which very properly attends the contracting such disorders, and the fear of being exposed in the communication of their indispositions, may deter many from deviating from the paths of innocence; and that therefore the publication which renders such an exposure unnecessary, is derogatory to virtue, and injurious to society: we beg leave to observe, it is not for the *vicious* we write, but for the *unfortunate*; that venereal taints may be contracted in a variety of ways without the smallest degree of criminality; and that such as are wretched enough to be thus undesignedly and unknowingly the victims of this contagion, will be most likely to fall sacrifices to the cruel disaster, either from ignorance or delicacy. The dissolute and debauched are at no loss to discover the consequences of their illicit amours in the earliest moments of indisposition; nor are they restrained from seeking immediate assistance by dread of shame, or apprehensions of detection: it is the innocent and unsuspecting sufferer, who, unconscious of having merited the punishment, languishes in secret misery, unacquainted with the nature of the complaint till it is perhaps past remedy, and who would probably rather endure the most fatal effects of it, even if the cause was known, than apply for relief under ap-

pearances which might bring virtue into suspected disgrace.

Nor are we inclined to think that all, or indeed any of those who receive the infection in consequence of indulging unlawfully a natural passion, should be left to their fate: which we apprehend is pretty nearly the case of those who, invited by the numerous bills distributed in the streets and stuck against the walls, resign themselves to the care of ignorant quacks; who being wholly unacquainted with the symptoms and appearances of the disease they undertake to cure, treat all states and stages of it alike; and, regardless of habit and constitution, or the virulence or progress of the disorder, administer to all indiscriminately the same quantities of the same medicine, or poison; (for, in different cases, it may be either;) measuring the length of the pretended cure by the strength of their patient's pocket, and giving up their hopes of one with their expectations from the other.

And as the passions will remain ungovernable whilst human nature continues to be frail, endeavours to lessen an irremediable evil, and to rescue from untimely fates or loathsome lives numbers of individuals, who, unable to avail themselves of the public charitable institutions, or to obtain help from the regular and skilful physician, are driven to the necessity of placing confidence where none is due, will at least be allowed works of moral and political rectitude: in the former light, it is a duty to alleviate the distresses of our fellow-creatures; and, in the latter, every life which

which is saved is an addition to the strength and riches of the state.

It is unnecessary to enter into the field of argument respecting the origin of venereal diseases, or the first introduction of them into Europe; it may possibly ever remain a question, whether the infection was imported by navigators, or created by libidinous excess, nor is it of consequence enough to deserve our attention: certain it is, that they seem to be marks of the disapprobation of the Almighty, set on those who offend his sacred laws, rendering their bodies as loathsome as vice and sensuality have already made their souls.

But the manner in which the infection may be communicated, is a matter of great importance; because it is not merely confined to the act of coition, but may be contracted by other means, and it is therefore necessary to enquire particularly what those means are, that they may, as far as possible, be avoided or guarded against.

It has been held, that it may be communicated by kissing; not merely from the breath, (for deplorable indeed must be the condition of that patient whose body is so contaminated that he exhales contagion) but by the close contact of the lips; in which cases the lips themselves, and the tongue and throat, will be the parts first affected, and will become sore and ulcerated.

Sucking children may either receive infection from the breasts, or having hereditary taints, may communicate it to the nurses; and in those instances the lips of the child, or the breast of the nurse, as the case may be, will exhibit the first appearances of disease: nor are instances wanting of nurses, who have received the infection from children they have suckled, communicating it to their husbands; though this has been considered as a doubtful matter, and many an innocent female has suffered very unjust censure from circumstances evident to experience, and reconcilable to plain reason.

Even sleeping in the same bed may communicate these diseases, if the patient has venereal ulcers or eruptions, or if he is subject to profuse sweats; but this, as well as the former cases, can only happen when the disorder is in a confirmed and very aggravated state.

Venereal taints may also be received by accidental inoculation; such as a cut finger touching an ulcerated part where there is a considerable discharge of virulent matter, or the same knife which has just opened a buboe, or venereal swelling, making an incision into any part of the body of a person in health.

But hereditary taint or infection is of all others the most obstinate and difficult of expulsion, because it shews itself in such an infinite variety of shapes; that it is hardly possible to ascertain the reality of its existence, or of consequence to apply proper remedies to eradicate the morbid particles which are so intimately blended with the infant habit. Hence it is that few children, born of parents corrupted by venereal diseases, survive the years of childhood; or, if they struggle through that period, they are subject to a thousand maladies, all arising from the same cause; and, beginning life at the wrong end, have to combat those infirmities from their cradles, which in the ordinary course of things are attendant only on the decline of life and the advances to old age.

Easily, therefore, as this infection is communicated, and subtle as is the poison it conveys, becoming so universally destructive to every part of the human body, and descending with unabated virulence to our posterity; how much is it our duty, as well as our interest, to avoid the foul contamination, and by the lawful and moderate gratification of those passions which were implanted in us for purposes widely different from those of licentious sensuality, to preserve our bodies from disease, and our minds from corruption of a nature still more pernicious.

C H A P. I.

Of the Virulent Gonorrhœa.

THE *gonorrhœa* is an involuntary discharge of morbid matter from the genital parts of either sex; and the time of it's appearance after infection is uncertain, being sometimes earlier and sometimes later, but seldom sooner than twenty-four hours, or at a greater distance than ten or twelve days: five or six days usually determine the certainty of it's having been received.

The first symptom observable in men, is commonly a sensation rather pleasing, in the whole or some part of the urinary passage; to this succeeds an uneasiness about the parts of generation, with the appearance of a small quantity of matter about the orifice of the urethra, which is whitish or rather watery when the disorder is most favourable, but soon becomes yellow, differing daily in colour and consistence; and if the virulence is great, changing to a greenish colour, and sometimes appearing streaked with blood.

When the running is apparent, the orifice of the urethra is also swelled and inflamed; though this symptom is sometimes perceivable previous to the commencement of the discharge, and is accompanied with a sensation somewhat disagreeable in making water, which is followed by a pungent smarting, and extreme heat throughout the whole duct of the urethra, but more especially at the termination of it. The linen now begins to be spotted, and the edges of the spots on it are of a darker colour than the centre; and this dark margin to those spots is a distinguishing mark of the venereal disease: the pain and smart in passing the urine, and the quantity of matter discharged from the urethra, now increase, as

well as the inflammation at the orifice of the urethra, which is apparent from the hardness and redness of the edges; a stiffness and hardness is perceptible through the whole length of the urethra, and a sense of stricture or tightness in the penis, more particularly during erection: as the disease gains ground, the matter discharged becomes more thin, loses it's clamminess, and is of a worse colour. The inflammation frequently occasions a crookedness, or curved figure of the penis, and an erection with involuntary emissions when the patient is warm in his bed; and this symptom is called a *chordee* or *priapism*: if the inflammatory symptoms run high, a strangury or difficulty of passing the urine occurs; and sometimes the inflammation in the prepuce, or skin which covers the glands, prevents it's being drawn back, which state of the part is called a *phymosis*; and when the skin being drawn back, cannot from the same causes be returned, this symptom is said to be a *paraphymosis*; and both these cases require immediate attention, as a mortification frequently takes place if they are not speedily relieved, or the whole penis becomes swelled and puffy, and without great care a gangrene follows, and in all cases ulcers are apt to be formed: in this manner the inflammation generally continues, increasing with additional symptoms for for a week or two. If a sufficient discharge can be obtained to wash away the venereal matter faster than it is formed, the symptoms may continue in the same state for some time, and then gradually decrease under proper applications.

Other symptoms also attend this disorder whilst it continues under the denomination of

a recent gonorrhœa or clap, such as shankers or chancres, buboes, and swelled testicles; each of which will be treated of hereafter.

When the *virulent gonorrhœa* begins to yield to medicine, a restoration of health generally follows speedily; the inflammation and difficulty of voiding the urine go off by degrees; the discharge, which was before sharp, acrimonious, offensive to the smell, and sometimes streaked with blood, changes to regular matter; and instead of those watery, bloody, greenish, or yellow appearances, becomes of a pale yellow colour, and regular consistence; and, after a short continuance in this state, grows ropy, clear, and stringy, and so disappears by degrees.

But from the difference in the structure of the parts of generation, the symptoms of this disorder in women differ from those in men.

The urethra is principally the seat of this disease in men, and the vagina, or passage from the womb, in women; and in the latter, as well as the former, the whole private part soon partakes of the infection, and suffers by the symptoms: in women the approach of the appearances of infection is rather quicker than in men, and the symptoms seldom rise to such a height of inflammation; yet, as their fibres are more delicate and relaxed, the discharge is generally more copious.

It has been an observation, that the symptoms are particularly severe, and the pains more acute, in the first infection, than after the patient has been repeatedly subject to these disorders; and this is more obviously the case in women than in men: the first contagion in a young woman produces the most aggravated symptoms, whilst those who have been accustomed to venereal injuries, perceive scarce any inconvenience, and but for the communication of the contagion, hardly know when they have received the infection.

But about three or four days after coition with a diseased man, the female patient feels from the irritation of the parts, an increased inclination for venereal pleasures; but this sensation soon changes to a painful one, with a darting and shooting, and a constriction of the vagina, attended with intense pain in suffering the act of coition, occasioned by the inflammation and fulness of the vessels; and the several internal parts of the pudenda, or female private part, are affected with a kind of stiffness or erection, similar to the priapism in the other sex. The constrictive pains now extend from the exterior part of the pudenda to the lower region of the belly, together with a kind of creeping motion about the sides and hips, and dull pains across the loins, and at the lower extremity of the backbone; the discharges assume nearly the same appearances and changes as those from men.

The female sex being subject to another disease occasioning a discharge of matter, not always differing wholly in appearance from that formed by venereal infection, mistakes of a very fatal nature have often arisen: and women who have unhappily contracted venereal taints from unfaithful husbands have, under the persuasion that the complaints they have laboured under have been occasioned by the fluor albus or whites, suffered the virulent gonorrhœa to proceed unchecked, to the destruction of their constitutions, the production of diseased and miserable children, and in many cases to the loss of life itself.

The treatment and cure of venereal diseases has been so differently represented by different writers, and the practice even of physicians differs so widely, that if we were to give merely our own opinion on the subject, it would but be to add one system more to the vast variety which have been already offered: we shall therefore lay before our readers the methods which have been

been proposed by some of the most eminent who have written on these disorders, and submit to them such improvements, as have been suggested to us by our own practice and experience.

But, however physicians have disagreed with respect to medicine, and to internal and external applications, they all seem to concur in the necessity of a strict regimen, as an indispensable ingredient in the cure of every complaint which arises from venereal taints.

The patient's food in a recent gonorrhœa, will not be required to be so limited as in a fever or diarrhœa; he may be indulged in moderate quantities of light animal food, plainly roasted or boiled, though the former mode of dressing it is preferable; but this should only constitute one meal in the day: the others should be made up with spoon meats, tarts, fruits, or biscuits; all salted and dried meats must be carefully avoided; nor must spices or aromatics be admitted in any part of the cookery; vegetables and preparations of the milk kind are also highly proper, as well as thin broths and gruels.

The patient's drinks should be wholly of the diluting kind, and taken very freely; teas of the marsh-mallows, or common mallows, decoctions of the roots of liquorice; infusions of linseed, whey, and milk and water, are calculated to thin the juices, and promote the discharge as well of matter as of urine: if wine and spirits cannot be given up entirely, they should at least be so diluted as to destroy the inflammatory qualities of them.

The less exercise is taken, and especially on horseback or in a carriage, the better; walking is the motion which is the least injurious, but even this may be used to excess.

The following are the methods of cure which are usually prescribed, and are generally attended with sure, though slow success.

On the first appearance of the symptoms, the part should be well and frequently washed with warm milk and water, and this practice should be continued during the whole course of the disease; to this may be added an injection of fresh oil of almonds.

During the first week, let the following laxative medicine be administered twice or three times, and repeated occasionally afterwards.

Take of barley water, two ounces—of Rochelle salts, half an ounce—of syrup of roses, two drams. Make a draught, to be taken in the morning.

When the virulence of the symptoms is somewhat abated—

Take of calomel, from three to five grains, according to constitution and circumstances—of conserve of hips, enough to make a bolus.

Let this bolus be given at going to bed, and the succeeding night another of the same composition; and, on the morning which follows taking the second bolus, administer this purge.

Take of the infusion of fenna, three ounces—of soluble tartar, three drams—of tincture of fenna, two drams. Varying the quantities in proportion to sex, age, and habit of body.

This course is directed to be repeated two or three times, as the symptoms require; after which the glans or nut of the penis, and the perineum or space between the privities and the fundament is to be well rubbed with strong mercurial ointment of the following composition.

Take of prepared hog's lard, half a pound—of quicksilver, three ounces—of simple balsam of sulphur, one dram. Grind the quicksilver with the balsam of sulphur till the
former;

former disappears totally; warm the lard, and add it by degrees, and mix the whole thoroughly.

The patient is to persist in the use of the ointment ten or twelve days, during which time he should be extremely cautious not to catch cold, and in case it should occasion a foreness of the mouth, he should discontinue it occasionally, and take the laxative potion first above prescribed.

After this, the following may be administered to compleat a cure.

Take of rhubarb powdered, two drams—of the compound powder of gum tragacanth, three drams—of balsam of capivi enough to make an electuary, of which the quantity of a nutmeg may be taken twice a day.

Some, instead of the mercurial bolus and unction, prescribe the following.

Take of quicksilver, one scruple—of mucilage of gum Arabic, as much as will extinguish the globules of the quicksilver—of precipitated sulphur of antimony, two scruples. Make sixteen pills, two of which are to be given morning and evening till the whole are taken.

Take of quicksilver, half an ounce—of mucilage of gum Arabic, four drams. Mix them well, and adding six ounces of barley water, make an injection, to be used twice a day.

Fresh infection is also said to have been removed from female patients, by washing with milk and water, injecting sweet oil, or oil of almonds; and after a few doses of manna and salts, or other gentle opening physic, using the following injection twice or three times a day.

Take of corrosive mercury sublimate, half a scruple; dissolve it in a pint of water. Of this solution, mix two drams with four ounces of water, and inject twice a day.

After the running and heat in making

water are somewhat abated, some advise a grain of the sublimate to be dissolved in an ounce of mint water, and taken twice a day; and depend on this medicine for the completion of the cure, varying the quantity in the different stages of the disease.

The following is also recommended, to be used from the first appearance of the infection, and continued till the cure is compleated.

Take of the balsam of capivi, two drams—of the compound spirit of lavender, one scruple. Mix, and give from eighty to one hundred and twenty drops in a glass of water, three times a day, once after each meal.

After this medicine hath been repeated a few days, the following injection, the drops being also continued.

Take of white vitriol, one scruple—of *lapis calaminaris*, five grains—of water, two ounces and half. Mix and inject.

Or, take of verdegrise, one scruple—of oil of sweet almonds, two ounces. Mix for an injection.

The following is also advised as a preventive when infection is apprehended.

Take of the common strong caustic, one dram; dissolve it in a pint of water, and filter it through paper. Mix as much of this solution in a tea-cupful of water as the mouth can bear without pain, and with this diluted liquor fill a syringe, and inject into the *urethra* (or *vagina*) and retain it there for about half a minute; then add to the remainder of the liquor a tea-spoonful of the solution, and wash all the external parts about the glans of the penis, or of the pudenda. After all, inject milk and water, and wash all the external parts with it.

Others recommend the early use of an injection of the following composition with gentle cooling purges, and are of opinion, that in recent cases, where the symptoms are

are not violent, a cure may be effected by these means alone.

Dissolve one scruple of sugar of lead in five ounces of rose water; warm it, and inject five or six times a day with a proper syringe.

If the inflammatory symptoms are violent, bleeding may be necessary, and the repetition of this operation must be governed by the circumstances which attend the disorder.

Diuretics are also useful in the early stages of this disease; for this purpose one part of nitre, and two of gum Arabic, may be reduced to powder, and well mixed, and of this mixture the quantity of a dram may be taken frequently in the patient's common drink: if the operation of this medicine should be too violent, the quantity may be lessened, or the whole omitted; and equal parts of gum Arabic reduced to powder, and cream of tartar, may be substituted, and a tea-spoonful given two or three times a day in the same manner.

Emollient clysters may also be useful where the inflammation and pain extend to the neck of the bladder, answering the double purpose of procuring stools, and acting as a fomentation to the parts inflamed.

Instead of the laxative medicines already prescribed, any of the following may effectually answer the purpose of opening the body, which seems to be the only evacuation of this kind necessary.

To a pint of the infusion of senna, add one ounce of tamarinds. Stir it well, and let it stand till the morning; then strain it off, and dissolve in it half an ounce of Rochelle salts. Divide this into four parts, one of which may be taken every hour till it produces a stool.

Or, take of the lenitive electuary, two ounces—of jalap powdered, one dram—of rhubarb powdered, one dram—of cream of tartar, one ounce—of the solutive syrup of roses, enough to make the whole into an

electuary; of which one, two, or three tea-spoonfuls, may be taken at night, and the like quantity the following morning, as often as occasion may require.

When the gonorrhœa is in a very inflammatory state, and the pains acute, bladders of warm water, or fomentations, may procure immediate relief; or poultices of bread, milk, and oil, or of the flour of linseed, may be applied to the parts for the like purpose.

A proper support for the scrotum or testicles will be of considerable use in the prevention of inflammatory symptoms; a truss of this kind is recommended to be worn from the first appearance of the disease.

And under the treatment last mentioned, that is to say, washing the parts affected by injections of milk and water and oil, reducing feverish symptoms by regimen and due evacuations, and fomentations or poultices; this disease will sometimes go off without the assistance of mercury: at any rate it should by no means be used in the early stage of the disease, when it is for the most part rather injurious than beneficial.

But if, after such a course, the discharge remains unabated and unchanged in colour and consistence, though the pains are lessened, the difficulty of making water relieved, and the nocturnal erection less troublesome, small quantities of mercury may be given; if the common mercurial pill is administered, one, or at most two, at night, and one in the morning, will be sufficient; and proper attention must be paid to the effect these medicines produce on the mouth: if they render it very sore, the quantity should be lessened, or the use of it remitted; if they occasion no alteration or uneasiness in the mouth, the doses should be increased till it is in a slight degree sore.

Or the following bolus may be substituted for the mercurial pills.

5 I

Take

Take of calomel, two grains—of conserve of hips, enough to make a bolus; to be taken at night. The quantity of calomel to be increased to seven or eight grains, according to the directions given respecting the mercurial pills.

In the administering mercury for this disease, regard must be had to it's operation, so as to avoid a salivation, which is unnecessary; and this may be done, either by regulating the doses, or by intermitting the use of them: some patients will bear the same quantities every day without inconvenience, whilst others will be as highly affected by them, though taken only every other day.

If mercurials should produce gripings or purgings, it will be necessary to give the infusion of fenna, or some other laxative, and the patient should be directed to drink plentifully of water-gruel: when the bowels are weak, mercury is sometimes apt to occasion bloody stools, and other disagreeable symptoms, which may be prevented by taking a gentle opiate, such as a scruple or half a dram of Venice treacle, or of the japonic confection.

Instead of other mercurials, the corrosive sublimate is given with very good success in the following form.

In four ounces of French brandy, dissolve two grains of corrosive sublimate. Of this solution a table-spoonful may be taken morning and night, washing down the former dose with two or three dishes of tea, and the latter with a draught of whey or milk and water.

Those who dislike to swallow a pill or bolus, may take mercury in the following form.

Take of quicksilver, half a dram—of gum Arabic, reduced to a mucilage or jelly, one dram. Rub the quicksilver with the mucilage till the globules of the former disappear totally; then add gradually, continuing to mix, two drams of balsamic syrup, and four ounces of any simple water.

Of this solution, from one table-spoonful to two may be taken night and morning, observing the effect, as in other forms of administering mercury.

And where the bowels are so tender, that they are unable to bear mercury internally, it may be applied externally with equal efficacy; and, in some cases, this method of using it is attended with advantageous consequences. A dram of the common mercurial ointment, mentioned in the former part of this chapter, may be rubbed in on the insides of the thighs at night, before a fire; and the same repeated every evening, or every other evening, according to circumstances and the effect of the medicine: the patient should, on account both of cleanliness and warmth, wear flannel drawers whilst he persists in this operation. The length of time during which the use of mercury, either taken inwardly or externally applied, is to be continued, must depend on the symptoms; it should however be persevered in till the virulent matter is apprehended to be totally expelled.

The use of the mercurial ointment will also sometimes bring on a return of the fever, inflammation, and heat, and in other instances will occasion a sore mouth and gums, and a foetid breath; in either of those cases it will be proper to omit the rubbing, and administer a dose or two of some cooling laxative; but as soon as these symptoms disappear, the rubbing in of the ointment must be resumed, though the quantity may be lessened, and longer intervals allowed; and, during the use of this or any other mercurial course, the patient should observe a proper regimen, both with regard to food, liquors, and exercise.

By the want of caution in these particulars, the cure of this disease is frequently protracted, and the constitution considerably injured.

When, in consequence of the last prescribed mode of treating the gonorrhœa, the
soreness

fiorenese and heat are gone off; when the quantity of the discharge is lessened, and the priapism no longer troublesome; and when the matter becomes of that colour and consistence which, as before described, denotes the last stage of the disorder; gentle agglutinants or astringents may be admitted, but still with much caution, as many of the dreadful symptoms which we shall hereafter mention will follow an injudicious or hasty check of the discharge: if however, from imprudence, any new complaint should occur, the return of the running must be encouraged by purging medicines, and the course of mercury must be renewed.

When, however, astringents are proper, the following medicine is recommended.

Take of lenitive electuary, one ounce—of the balsam of capivi, six drams—cream of tartar and rhubarb in powder, of each two drams—syrup of roses, as much as will make the whole to an electuary; a tea-spoonful of which may be taken morning and night.

If this should fail to produce the desired effect, and occasion no disagreeable symptoms, Venice turpentine, or balsam of Peru, may be used in moderate quantities: or if these medicines should disagree with the patient's stomach, a tea-cupful of the infusion of the bark may be taken twice a day, with from ten to twenty drops of the acid elixir of vitriol, or the same number of drops of the elixir may be administered in a glass of Port wine.

Astringent injections may also be used when all appearance of virulency is at an end; for this purpose that which we have before prescribed, composed of sugar of lead and rose-water, will be proper.

But some writers prescribe a mode of treatment so totally different from those we have already laid down, that we think it necessary to state it with accuracy.

According to the opinions of these writ-

ers, bleeding and purging are both pernicious: the former, because a supply being necessary to fill the emptied vessels, an absorption of the virus or infected matter from the external parts would necessarily take place for that purpose; and the latter, because, although it might serve to empty the bowels, and drain the mass of blood, yet the stimulus or active operation of these medicines would increase the spasm in the system, and retain the acrimony which ought to be expelled by urine and perspiration, and occasion a revulsion of the infected matter to the internal parts of the body.

Instead of the usual evacuations, the following prescription is recommended.

Take of purified nitre, two ounces—of cinnabar of antimony, two drams—of calomel, one scruple. Rub the cinnabar and calomel together on a marble, with a small quantity of water, until it becomes a perfectly fine powder; then add the nitre, rubbing it in like manner, but without water, till it is well mixed. Divide the whole powder into twenty-four equal parts, two of which are to be taken at proper distances every day, or occasionally, as circumstances may require, either made into a draught with any simple water, and sweetened with the balsamic syrup, or in a bolus mixed with any proper vehicle.

In the operation of this powder, the nitre is intended to promote gentle perspiration and urine, the cinnabar to act as an antispasmodic and to relax the constriction of the fibres, and the calomel to correct the acrimony in the blood.

As this powder may probably occasion gripings, the patient is advised to dissolve in the draughts in which it is mixed a lump of sugar which has first received two or three drops of the essential oil of peppermint, which will prevent this complaint from being troublesome.

The immediate feat of the disorder is next to be the object of consideration; and this

this is in men generally about two or three inches up the urethra, but in different parts of the pudenda in females.

The disorder so situated consists of one or more small ulcers, for the cure of which, and consequently the removal of the whole complaint, the following injection is directed.

Take any quantity of calomel, and reduce it in a marble mortar to so very fine a powder that it may readily suspend in water; then put it into a proper vessel, pour a large quantity of water on it, and let it be well shaken: after this let it stand till the water is perfectly clear, then pour it off carefully, and let the calomel dry by degrees. One scruple of this powder may be mixed with an ounce of water, and kept in a phial for use.

When the injection is to be applied, which must be once, twice, or thrice a day, according to circumstances, let the phial be well shaken, and let the patient always make water immediately before he injects; a small quantity at a time will be sufficient, which, by holding the prepuce close, should be kept in as long as possible, permitting it to surround the crown of the glans before it is suffered to get out: if the urethra is sore, or the glans in an inflammatory state, as in young subjects and those who are unused to the disorder is frequently the case, the pipe of the syringe is directed to be rubbed with a little mercurial ointment to make it pass the more easily.

And by the use of this injection, those who recommend this treatment assert, that a virulent gonorrhœa, or recent clap, may be effectually and radically cured in a much shorter time than by means of any medicines internally administered, and with at least equal safety and certainty.

Nor do those who recommend this injection confine it's efficacy to the mere case of which we now treat; on the contrary they contend, that it may be applied with success to all scrophulous fistulas in every

part of the human body; assuaging the most gangrenous inflammation, by the same action of correcting the acrimony of the fluids, relaxing the spasmodic constriction of the solids, blunting the edge of the most corroding and putrid humours by it's antiseptic and antacid qualities, and changing the most acrimonious discharges into mild and well-digested matter; and that as this medicine is freed from the stimulating saline particles of corrosive mercury, it acts gently, and is absorbed in the animal acrimony without producing any perceivable irritation in the system.

Neither is the patient restrained from the use of this injection in any stage of the disorder: it is indeed advised to apply it as early as possible, because it will, without doubt, remove this malady more easily and expeditiously at it's commencement than in the progress of the disease, when the symptoms are become more aggravated; it is also recommended as a certain and innocent preventive.

And instead of astringents, and as a restorative to recover the tones of the genital organs, and of the whole system, after the gonorrhœa has been cured by the use of the antispasmodic powder and injection, the following medicine is prescribed.

Take of the Canada balsam, three ounces—of gum guaiacum, half an ounce—of rectified spirit of wine, one pint. Let it digest in a moderate heat for a week, shaking it frequently; at the end of this time, when it is perfectly subsided, either pour or strain it off fine. To this tincture add two drams of essential oil of peppermint, and give a tea-spoonful twice or thrice a day in a glass of wine or simple water, sweetened with the balsamic syrup.

We have now offered various courses of medicines and prescriptions for the cure of this disease, as they occur in common practice, or have been extracted from the writings of physicians eminent for knowledge, and distinguished for practical experience:

we shall now subjoin our own opinion, founded as well on a judgment formed upon repeated experiments, as upon the common principles of reason, in concurrence with a due consideration of the nature of venereal diseases, and their operations and effects in the human body.

We have the best reasons to approve of the earliest attention to the apprehensions of infection, and of the injection prescribed to be used as a preventive when such suspicions arise.

On the first appearance of a discharge, frequent washings with milk and water, and injections of oil of sweet almonds or olives, are of great importance; in the very early stages of the disorder, the complaints are considerably lessened, and the cure half completed, by attention in these particulars.

And at this time we have no doubt but the injection of calomel and water may be used with great propriety, and with the strongest probability of obtaining by it a compleat and perfect cure.

But we do not wholly agree with those who recommend this injection, in the necessity or use of the antispasmodic powder, so confidently urged as an indispensable accompaniment of the injection; we are rather inclined to disapprove of the early administration of mercurials internally, before the heat and other inflammatory symptoms are considerably lessened.

And for this purpose we conceive, that gentle evacuations are of great advantage; the bleeding to be determined entirely by the symptoms, and the purges to be of the mildest kinds.

We apprehend astringents should by no means take place whilst the smallest token of virulence remains, nor should any others, but such as are of very gentle operation, be at any time admitted.

Nor do we believe that the injection may be used with equal advantage in every stage of the disorder: before it has made any considerable progress, it may be relied on;

and though we are not equally confident of its success, unassisted, in the advanced state of the disease, yet we are of opinion it may even then be used with good effect, accompanied by internal medicines.

The system which we would recommend in the treatment and cure of this disease, differs in some measure from all the preceding; yet as it is derived in part from a coincidence with the opinions and doctrines of others, and as the remainder is the result of long experience, we trust it will be found effectual for the purpose of eradicating this species of venereal infection, and venture to offer it as a safe, certain, and easy cure, for the virulent gonorrhœa or recent clap.

If the infection hath been so effectually communicated as to baffle the preventive powers of the injection prescribed for that purpose, recourse should be immediately had to the injections of milk and water and oil: in every stage of the disorder cleanliness is of great importance; but on its first appearance it is so essential, that much of the virulence or mildness of the future symptoms depends on perfect circumspection that the discharge be not suffered to remain, if it can be possibly prevented, a single moment on the parts affected.

If there are any extraordinary inflammatory symptoms, bleeding, and even a repetition of the operation, may be necessary; but the use or omission of this evacuation depends so much on different circumstances, that it cannot be prescribed positively, without an actual examination of the patient's situation.

But in all cases opening medicines are proper; and though we disapprove of stronger purges, except in very particular cases, yet manna, senna, tamarinds, rhubarb, cream of tartar, and the like mild laxatives, should be administered at least three or four times, oftener if necessary, in the first eight or ten days after the symptoms are evident.

At the same time we would recommend the constant use of the calomel injection, as before prescribed, with a mild, cooling, and opening diet, an abstinence from all liquors of a heating quality, and a forbearance of any violent exercise.

If by these means the ulcers are healed, the discharged matter brought to a good colour and consistence, and all the symptoms of infection removed, the cure may be compleated by the gentle astringent electuary and injection before prescribed, or the use of the bark with the cold bath.

But if the disease should be obstinate, and refuse to give way to the injection, a circumstance which we apprehend will very seldom occur, either of the internal courses of mercury herein before prescribed may in that case be resorted to, after moderate evacuations, and the cleansing and softening injections.

Hitherto we have treated of the gonorrhœa under it's most mild and benign appearance, unattended with those troublesome and alarming symptoms, which sometimes, for a while, baffle the skill of the physician, and the operations of internal and external applications, rendering the

cure tedious and difficult; when these symptoms unfortunately occur, different treatment is required, which will be considered in subsequent chapters.

But, before we close the present subject, it may be necessary to caution those, who are by imprudence or misfortune the victims of this disease, against indulging themselves in libidinous pleasures before the cure is perfectly compleated; from impropriety of conduct in this particular, the cure is not only protracted, but symptoms are induced which would otherwise never appear; the constitution is racked, and the habit injured by a continuance of the discharge, and doubts are perpetually arising of fresh and accumulated infection.

But stronger arguments than these may be used to deter mankind from such desperate acts: whoever willingly or knowingly communicates this disease, puts the life of another in danger; and however lightly such a matter may be treated upon a transient view of it, it will, on maturer consideration, be found to be a crime of a very deep dye; a crime by which the perpetrator may eventually incur no smaller degree of guilt than that of actual murder.

CH A P. II.

Of Shankers and Buboës.

IT has been held that *shankers* or *chancres* are not certainly venereal, but may attend without a gonorrhœa or other venereal taint; they are in some instances said to be an original disease, but are much more commonly symptomatic of a gonorrhœa, or a confirmed pox.

They sometimes make their appearance within the inflamed prepuce, and sometimes are scattered over the whole glans; but are chiefly found behind the crown,

and near the *frænum* or string which draws back the prepuce, in men; in women they are commonly seated within the lips of the pudenda.

They approach at first like a little erysipelatous inflammation with itching; this is followed by one, and sometimes several, small pustules, filled with a transparent fluid, and in some instances becoming white; these break and form a small but spreading ulcer, painful and inflamed, and penetrating

penetrating sometimes so deep as to corrode arteries and veins, and even occasion dangerous hæmorrhages; however, the lips of these ulcers gradually become callous, and the middle is filled with a shining or glossy matter, which frequently changes to a dirty white, and sometimes inclines to green.

The lips of these ulcers never appear swelled or turned out, but rather contracted, smooth as if polished, and of a pale or ash-colour; the surrounding calosity about the edges of these ulcers distinguishes them from all others, and this hardness is said to be occasioned by a coagulating quality in the venereal infected matter.

These ulcers are of a cancerous kind, and will seldom yield to any other applications than mercurials; they are likewise peculiar to glandular substances, and from the similarity in the structure of the fauces or entrances of the gullet, and the parts of generation, it is a very common case in venereal habits, for shankers or ulcers of the like kind to appear in the throat, as well as in the mouth, tongue, and other neighbouring parts, where they may do much mischief if they are not attended to in season.

Caustics were formerly applied to eradicate these ulcers, but the use of them is now with great propriety generally laid aside; when the numbers are considerable, and attended with great inflammation, fomentations or emollient poultices may be useful to reduce the inflammatory symptoms, and prepare for the use of mercurials.

The common mercurial ointment is usually applied to dress these ulcers, which is spread on dossils of lint, and the dressings changed once in twenty-four hours.

But the following cerate is recommended, as possessing the highest antacid, cleansing, and healing qualities.

Take of red corrosive mercury, two drams—
of calomel, one ounce—of sugar of lead,
half an ounce—of white wax, two ounces—

of olive oil, three ounces—of essence of bergamot, ten drops. Let the red corrosive mercury and calomel be rubbed together on a marble, with a small quantity of water, till the whole is reduced to a very fine powder; having mixed this with sugar of lead, rub it again till it is perfectly fine: melt the wax with the oil over a slow fire, sprinkle in the powder, stirring it while this is doing, then add the essence, and continue to stir till it is cold.

This cerate is very warmly recommended, not only in venereal cases, but in all ulcerations and cutaneous eruptions; and the use of it advised on any part of the body, rubbed in on the skin in eruptive complaints, and applied on dossils of lint to ulcers or wounds: but great care and caution is necessary in the admission of this or any other external application, in diseases of the skin which are not manifestly of the venereal kind.

Buboes are swellings or tumors in the inguinal glands or groin, and are occasioned in general by the lymph or fluid in the glands, which are the seat of this disease, being thickened by the venereal virus or infected matter, by which means secretion in them is at first rendered difficult, and at length impossible.

These tumors are common attendants on a confirmed pox; when they appear in cases of recent infection, they are for the most part caused by a suppression or check of the discharge of a gonorrhœa, which may happen from excessive evacuations, a violent cold occasioning obstructions, and various other circumstances.

The first symptoms of an approaching bubo, are a small tumor like a kernel in the glands of the groin, generally attended with a dull pain and stiffness; the swelling, which does not at first seem larger than a pea, gradually increases in size, but is attended with no external inflammation or remarkable soreness; yet if it is handled, it immediately becomes more painful, and the stiffness is augmented: by degrees more

or less flow, this kernel arrives at the bigness of a hazel nut, and then the pain is felt more sensibly, with intervals of throbbing; and the whole body becomes affected with inflammatory symptoms, such as weariness, disinclination to motion, pains in the limbs, head-ache, and thirst.

The patient now begins to complain of indisposition, and if at this period proper remedies are applied, the bubo soon disperses; but if, from design in the treatment or habit of body, it inclines to suppuration, the tumor, together with the pain and other symptoms, increase, till the swelling sometimes reaches the size of a pigeon's or even an hen's egg; when it becomes more inflamed, takes a red or bluish cast, and then the matter begins to form, and may soon be felt in an actual state of fluctuation.

Being arrived at maturity, the tumor changes its appearance, the symptoms of inflammation abate, the tenderness subsides in a certain degree, a protuberance is perceivable which becomes soft, and this part is in general the least painful, and distinguished in colour from the others, inclining sometimes to a yellowish.

For the dispersion of buboes, bleeding has been usually prescribed to abate the inflammation, together with gentle cooling purges of manna, Glauber's salts, senna, rhubarb, or the like; and some have recommended the application of leeches to the part.

But the more certain method to get rid of these troublesome guests, is the use of mercurials, which should take place as early as possible, when the task will not in general be found difficult; and for this purpose, some advise rubbing the part with as much of the mercurial ointment as the patient can bear without bringing on a salivation; and others recommend a plaster about the size of a crown, spread on leather with the mercurial ointment, and kept constantly to the swelled groin, the hair being first shaved

off: and this plaster will in general remove the complaint without farther trouble.

When the inflammation is, however, arrived at such a height that the formation of matter is expected, poultices of the following composition have been recommended, as equally calculated to promote the operations of nature in the dispersion or suppuration of the tumor.

Take of white bread and milk, boiled to a poultice, the quantity of half a pound—of the cooling or anti-inflammatory liniment hereafter mentioned, half an ounce. Mix them well, and apply to the part.

To make the liniment—

Take the extract of lead, mercurial ointment, and the before prescribed cerate, of each equal parts. Mix them well on a marble.

But others advise only a common poultice of bread, milk, and oil, applied warm, with the addition of lily roots, bruised onions, or yellow basilicon, to encourage the suppuration, if it proceeds too slowly; or if a poultice cannot with convenience be kept on, a soft plaster with galbanum.

If the matter is actually formed, it hath been usual to indulge the patient in an alteration of diet, and to permit him to live more generously, and drink a glass of wine, as usual in health; but this is a liberty we cannot approve of, because it does not appear to be founded on any reason: it seems totally impossible to draw the whole venereal infection from the body this way; nor will the greatest or longest continued discharge from a bubo eradicate this disease from other parts, where it has taken place, without the assistance of other remedies; and therefore we are of opinion, that the more speedily these tumours can either be dispersed or brought to suppurate, opened, and healed, the more it will be for the patient's advantage, as it is certainly less disagreeable, troublesome, and dangerous,

dangerous, to deal with one enemy than a multitude; nor is it consistent with common sense, to prefer discharging the virulent matter through a painful ulcer, to the carrying it off in the usual way.

When, therefore, the tumor is arrived at maturity, and the matter compleatly formed, it should be opened as speedily as is consistent with prudence, either by the knife or caustic; though, as the former is attended with less pain, and the wound more readily disposed to heal, than that which is made by escharotics, we do not hesitate to recommend this method where it can possibly be practised: after the bubo has been opened, it may be dressed, and

treated in all respects as other ulcers, though the cerate before described is said to answer every purpose of cleansing it, keeping down fungosities or proud flesh, and healing the wound.

In men of relaxed habits, and women, buboes generally come on more rapidly than in men of strong, vigorous, and robust constitutions: when these tumors attack the female sex they are at first attended with little pain, but soon become large, troublesome, and full of matter; and in those habits, whether they break of themselves, or are opened judiciously, they soon heal again under proper management.

C H A P. III.

Of the Phimosis and Paraphimosis, Chordee, and Priapism.

THE *phimosis* and *paraphimosis* have already been mentioned among the ordinary symptoms of the virulent gonorrhœa or recent clap: the former generally attends those whose glans being wholly covered by the prepuce, it swells, increases in bulk, and becomes inflamed, and is not only incapable of being drawn back, but sometimes so nearly closes at the point of the penis, as hardly to admit the passage of the urine, or the discharge of the gonorrhœa.

The *paraphimosis* happens to those whose prepuces are too short to cover the glans, in which case the inflammation and swelling occasions it to shrink, or as it were forcibly drags it back behind the glans, where it becomes contracted, and closes upon the penis behind the crown, so that it is not only impossible to bring it forward, but it adheres with such stricture and tenacity, as to increase very considerably the inflammation of the penis.

When the *phimosis* or *paraphimosis* are suffered to remain long, they are always attended with shankers, and in this case the *phimosis* is most troublesome; because, from the difficulty or rather impossibility of getting at these ulcers, they become inveterate, and their lips callous and stubborn, and sometimes the whole surface within is not only ulcerated, but these appearances are communicated to the glans, the crown, and in particular the *frænum*, or string of the prepuce; which parts in some instances adhere to the diseased prepuce, and they actually grow together in some places, forming behind these conjunctions corroding abscesses, which either eat through the prepuce, or are obliged to be opened to discharge the acrimonious matter contained in them.

The *paraphimosis* is a complaint of a still more alarming nature, frequently bringing the life of the patient into imminent danger; the prepuce becoming violently inflamed,

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contracts itself behind the glans, and prevents the reflux of the blood from the penis, by which means that part, as well as the retracted prepuce, swells, and each part aggravates the inflammation of the other, so that without timely assistance a gangrene or mortification soon comes on, and not only the member, but life itself, is hazarded: and though these violent symptoms do not always occur, yet in general a paraphimosis is a very troublesome complaint, concealing ulcers and shankers behind the crown, which fretting among the glans, are apt to leave fistulas, which sometimes even penetrate into the urethra. If the paraphimosis should harden so as to become scirrhus, the callosity and habitual contraction occasion a considerable degree of pain, and are extremely inconvenient at times of erection.

Somewhat of the same nature occurs in women, but is by no means equally troublesome; the inflammation and stricture to which females are subject in the lips of the pudenda, though they frequently occasion shankers within, cannot, from the different construction of the parts, be productive of the same disagreeable consequences as in men.

The phymosis generally yields to the application of mercurial ointment; but the following is recommended as a better form than that usually prescribed.

Take of purified hog's lard, half a pound—of quicksilver purified, three ounces—of common or diachylon plaster, one dram. Mix the plaster with a small quantity of the lard, and rub the quicksilver till the globules disappear; then add the remainder of the lard, mixing it carefully. A drop or two of oil of rhodium, or essential oil of bergamot, will give the ointment an agreeable flavour.

If small quantities of this ointment can be rubbed on the swelled, hard, and knotty parts, it will in general disperse them, and

remove the painful constriction; if this cannot be done, poultices in which a small portion of the ointment hath been mixed, will generally answer the purpose effectually.

Though the paraphimosis, as has been already observed, is frequently attended with very unpromising appearances, yet the use of the mercurial ointment will in most cases remove this complaint.

The liniment, above prescribed in the case of shankers, is also very highly recommended, to be spread on lint, and wrapped round the paraphimosis and glans; it is even said to be capable of getting the better of a beginning gangrene, but on account of the lead, is advised to be used with caution and moderation, and in slight cases the cerate may answer the purpose; the strength of the liniment may, however, be reduced by the addition of vinegar, which readily intermixes, and in this way it may be adapted to all circumstances.

When the swelling of the prepuce or lips of the pudenda appears to be inclined to fill with matter, (which is seldom the case, except in very vitiated or emaciated constitutions) the following liniment is recommended, the volatility of which may assist the mercury to penetrate and render it more effectual.

Take of the mercurial ointment, half an ounce—of oil of saffras, ten drops—of camphire, ten grains—of the volatile spirit of sal ammoniac, two drams. Reduce the camphire to a very fine powder by the help of a drop of spirit of wine; then add the oil, and afterwards the ointment; and having incorporated these ingredients, throw in the volatile spirit, and make a liniment.

This liniment may be applied on lint, and will in general take off those disagreeable appearances.

A *chordee* is a painful contraction of the under part of the penis, which, when it is erected, and only then, is affected disagreeably with a constrictive force, as if it was pulled downward by a string or cord; and the

the pain is chiefly under the frænum, and through the urethra.

The *priapism*, or involuntary erection, which generally attends the virulent gonorrhœa, is occasioned by the irritation of that large share of nerves which are distributed among the organs of generation.

A priapism is in some cases an alarming complaint, especially if it continues any considerable time without intermission; for, as the circulation of the blood is in some measure impeded, the member sometimes swells to a great size, is in a very inflamed state, and so exquisitely sensible and tender, that the least touch is dreaded: in this state a gangrene in some instances commences; and, if a mortification ensues, the amputation of the member will hardly prevent the most fatal event.

Women are subject to a symptom in some measure answering the chordee in men; this is a constriction towards one side of the

vagina or passage from the womb, from which they sometimes experience a degree of pain, though by no means so considerable as that occasioned by the corresponding symptom in the other sex.

When the other symptoms of inflammation abate, the priapism and consequent chordee will of course subside; but when it is violent, and the inflammatory constriction is general, it will require other aid besides external applications: in this case, if the habit is full and sanguine, bleeding will be proper, and an opiate may be given at night; clysters also are of use, and the patient should observe a low and cooling regimen.

When by these means the inflammation is somewhat reduced, the mercurial ointment may be rubbed in along the duct of the urethra, or the cooling or anti-inflammatory liniment, herein before prescribed, may be used with great hope of success.

CH A P. IV.

Of the Strangury, Swelled Testicles, and of Venereal Excrescences.

THE increase of the titillating sensations on the approach of the gonorrhœa, is generally attended with a weeping of watery matter from the urethra in men, and from the pudenda in women, which brings on gradually a *strangury*, or difficulty of making water.

At first the urine passes oftener than usual, with a remarkable titillation, which degenerates by degrees into a sharp and burning pain, and which is more particularly felt after the water has been evacuated; the urine now acquires a higher colour in different shades, from a saffron tinge to that of strong-beer; as the colour rises, the quantity is diminished, but the discharge is of so acrimonious a nature, that it oc-

casions a perpetual irritation to urine, though the patient is scarce able to bring off a spoonful at a time, and that so corrosive, that the pain in voiding it is almost insufferable.

Women suffer less in this complaint than men, which arises from the different structures of the urinary organs; and those who are of strong and robust constitutions, and in high health, are in general more subject to it than those of relaxed and delicate habits.

As long as the patient can retain his urine some time, though it is attended with heat and pain, the symptom is called a *difficulty of making water*; but when the neck of the bladder is remarkably affected by

by the pain, and it extends to the bladder itself, and is attended with a constant irritation and inclination to make water, which yet is discharged in small quantities with great pain, the complaint is said to be a *strangury*.

But a total *suppression* or *stoppage* of urine, which sometimes happens, is a case of extreme difficulty and danger; and if the kidneys should be so far affected by the virulent infection, as to excite inflammation and prevent the secretion of the urine, great apprehensions will arise of very fatal consequences.

The former cases are not often attended with very considerable danger, and the complaints may most commonly be removed by the courses of medicine and treatment which apply to the gonorrhoea generally; should the latter symptom prevail, the use of bougies and the flexible catheter may be necessary.

Of the various compositions of bougies, the following is offered as the prescription of Mr. Daran, a French surgeon, who is said to have made considerable improvements in the formation of these machines.

Take of virgin wax, eight ounces—of spermaceti, three ounces—of hog's lard, two ounces—of olive oil, one ounce—of ceruse, six drams. Boil the ceruse and oil together in a pipkin with water, till they unite into one body; and then having melted the other ingredients together, add it to them.

The bougies must be made up of different sizes, from the bigness of a knitting-needle to that of a goose-quill, in the following manner. Spread with the composition pieces of soft linen rags or cloth of any dimensions, and cut them out into slips from six to ten inches long, and from half an inch to an inch broad; or, as the end of the bougie which is first to enter the urethra is required to be somewhat smaller than the other parts, the slips may be cut

a little tapering; and these slips, with the side which is spread outward, must be smoothly and dexterously rolled on a glazed tile, or polished marble stone, to the form of a taper or wax candle.

But if these bougies are required to be corrosive, melt an ounce of the composition, and add to it a dram, more or less according to the circumstance, of red precipitate, and dip the narrow end of the linen for about the sixth part of an inch in it; and when this is cold, proceed to spread the remaining part of the linen, and to form the bougies as above directed.

In this way the same composition will answer a double purpose, by omitting or adding the red precipitate; which, if a still more active escharotic is wanted, may be changed for the corrosive sublimate; and the pointing the end of the bougie only with this acrid matter, is attended with the obvious and important advantage of avoiding the irritation and corrosion, which bougies spread in every part with the caustic matter must necessarily occasion in the whole length of the urethra.

When, from neglect or ill treatment, the urethra is filled with carnosities, which are become so callous as to render the introduction of the catheter difficult, the following composition is recommended for the bougies.

Take of mercurial plaster, one ounce—of the best shell-lac powdered, fifteen grains—of Venice turpentine, half a dram—of calomel, prepared as directed for the injection, one dram—of red corrosive mercury prepared in like manner, ten grains. Melt the turpentine over a gentle fire, throw in the lac, and incorporate them; then add the plaster, and lastly the calomel and corrosive mercury. Mix the whole well, that it may not separate; stirring it briskly, lest it should catch.

With this composition, instead of the above, spread the linen rags, and proceed in the same manner to make it into bougies.

Of

Of all the effects produced by venereal infection, there is hardly one more dispiriting than the *hernia humoralis*, or *swelled testicle*: nor is the dejection occasioned merely by the pain, though that is generally exquisite; but the consequences which may be apprehended from this complaint are of a nature so alarming, as to be dreaded by those possessed of the greatest degree of fortitude.

The same causes which produce buboes, may also occasion swelled testicles, and the termination of both complaints is alike uncertain; but this case is always attended with very considerable pain, difficulty, and uncertainty.

Of all the organs, none is so exquisitely delicate, so curiously and elaborately composed, or so sensible and so subject to excruciating pains, as the testicle: a blow or contusion on the testicles is attended with such changes of countenance, as are sufficiently expressive of the torment it occasions; and if a gangrene or mortification follows such an accident, as is too often the case, if effectual remedies are neglected to be speedily applied, nothing less than an extirpation of the part will prevent the patient's meeting his fate in twenty-four hours, and even this expedient is not always successful.

The first symptom of this complaint is a wandering, creeping pain, in one or both testicles, attended sometimes with intermissions or intervals of ease; yet the sensation increases by degrees, and at last degenerates into a dull, heavy, and continual pain, with a sense of immense weight in the part affected, and sudden shootings and dartings, extending to the lower region of the belly and across the loins.

At this stage the testicle begins to swell, becomes inexpressibly sore and tender to the touch, and the weight of it so intolerably burdensome, that, unless it is supported, the load will be found too oppressive both on the patient's strength and spirits; and, as

the inflammation increases, the parts by which the testicles are suspended partake of the same complaints, a fever comes on, a throbbing pain is felt, and the whole scrotum is affected with inflammatory symptoms.

The crisis is either a dispersion, suppuration, gangrene, mortification, or scirrhus; and in this state of the inflammation, one or other of these events must speedily take place.

If the former can be effected, it will be a happy circumstance; but for this purpose great caution is necessary, as well as a strict adherence to regimen and medical directions.

A suppuration, though always troublesome, tedious, and precarious, and apt to form a cancerous or fistulous ulcer, will yet in most cases yield to proper management, and with due care a cure may be obtained without any very considerable degree of danger; and the approach of matter may always be apprehended, when, after the inflammation and throbbing have continued a considerable time, the latter abates, together with the soreness, though the bulk of the testicle rather increases than diminishes, and it begins to soften in some particular part, and make way for the matter to fluctuate.

The approach of the dreadful symptoms of gangrene or mortification can only be foretold by a decrease of pain, a torpor or numbness of the part, and a sickness or nausea at the stomach; and these fatal appearances are much more frequently produced by imprudence or injudicious management, than as a natural consequence of the venereal infection; to the same causes may a scirrhus be generally attributed, though this malady sometimes takes place in spite of the utmost efforts of skill and precaution: and in these cases, the only relief that can be expected is by taking off a burden, which is not only useless but troublesome; nor is even this operation

performed without great pain, difficulty, and danger, so that the situation of the unfortunate patient who labours under this complaint is truly hopeless and deplorable.

The patient's food must be low, cooling, and light, and his drinks diluting; for the former spoon-meats are most proper, and the latter should consist of teas and decoctions of the emollient herbs, whey, and the like; avoiding carefully, both as to food and liquor, whatever is spicy, heating, or otherwise inflammatory.

The first attention must be paid to the suspension of the part; which may be done by a proper bandage round the middle, and a bag or truss judiciously fastened to it, in such a way as not to prevent the patient's natural evacuations, or oblige him to loosen it on every such occasion.

After this necessary care, bleeding will be requisite; and the quantities taken away, as well as the repetition of the operation, must be governed by the patient's habit of body, the progress of the inflammation, and other circumstances.

A brisk purge should now be taken, for which the following forms are recommended; though some advise an aloetic composition.

Take of jalap in powder, half a scruple—of calomel, three grains—of oil of anise seeds or peppermint, two drops—of balsamic syrup, enough to make a bolus; or it may be made into a draught, if more agreeable, with two ounces of any simple water. In either case it is to be taken in the morning fasting.

Or, take gamboge and fine sugar, of each one dram—of calomel, one scruple—of oil of cinnamon, two drops. Mix, and reduce the whole to a fine powder, and with a small quantity of water form it into forty pills, rolling each in the powder of factitious cinnabar. Of these pills, four taken at night, and three in the morning, will in general prove a sufficient dose; but the quantity of both these purging medicines must be varied according to circumstances.

If the constitution will admit of an emetic, it will in this case be of singular service; for this purpose the following form hath been prescribed, though others are of opinion, that the powder of ipecacuanha alone is a more safe and equally efficacious vomit.

Take of the ipecacuanha root in powder, one scruple—of calomel prepared in water, as before directed, four grains. Make a bolus or draught with any fit vehicle; but the quantities in this prescription are adapted to strong and robust habits, and must be considerably lessened for a weak or tender constitution.

But emetics should not in general be directed till the bleeding and purging have in some measure reduced the inflammatory symptoms.

Poultices of white bread, milk, and oil, are recommended to be applied to the part, or folded rags dipped in Goulard's Saturnine Water to be laid over the inflamed testicle, and changed as often as they become warm or dry; the common fomentation is also frequently used in these cases; sprinkling the flannels as they are wrung out with camphorated spirit of wine and spirit of sal ammoniac.

If the swelling refuses to yield to these applications, mercurials will be necessary; and half an ounce of the mercurial ointment may be mixed with a common poultice, or a less quantity gently rubbed in on the part; or a mercurial plaster laid over the scrotum may probably answer the purpose: the use of mercurial medicines internally will also be proper as soon as the inflammatory symptoms are abated, and the patient should be kept as much as possible in bed, and upon his back.

If, notwithstanding all attempts to disperse the swelling, the formation of matter is unavoidable, the suppuration should be encouraged by emollient poultices; and as soon as, by the fluctuation of the matter, it appears

appears to be in a proper state, it should be opened with a knife or lancet, for in these cases escharotics are dangerous, and tend to injure the testicle, and prolong the cure; but the operation of cutting must be performed with judgment and caution, lest the testicle should be touched by the instrument, which might prove of fatal consequence.

After an opening has been made, and the matter is discharged, it should be dressed and healed in the same manner as other abscesses; but the lips of the wound will not require to be distended by tents, and the cerate before prescribed is said to be an admirable dressing to compleat the cure.

There are also certain *venereal excrescences*, which are frequently extremely afflictive in the very aggravated state of the virulent gonorrhœa, and which are distinguished by the several names of *verruce*, *porri*, and *condylomæ*.

The former are a kind of venereal warts, which sometimes rise in obstinate cases, and are in general tokens of a latent pox: they are of various sizes and figures, sometimes smooth, and not much larger than pins heads; in others they arrive to the magnitude of a button, and the surfaces are rough and unequal. In men they are in some instances single, and in others scattered all over the glans and prepuce: the *clitoris*, prepuce, and internal lips of the pudenda, are the parts where they usually appear in the other sex.

When they are considerably protuberant, and are less at the basis than the extremities, appearing suspended as it were by a stalk, they are called *porri*; and in this appearance of these excrescences they will frequently fall off spontaneously, but in this case they generally sprout out again almost immediately: when they are numerous upon the glans in men, or the entrance of the vagina in women, they are painful and troublesome, and especially in coition.

Those excrescences which are denominated *condylomæ*, seem to be large, round lumps, concealed and spreading under the skin, and are more commonly found in the perinæum, or part between the fundament and privities, the scrotum or bag which contains the testicles, and the tegument of the penis, in men; and in the lips of the vagina or perinæum in women: these are rather more difficult to remove than either of the foregoing kinds, rooting themselves deeper, and not unfrequently bursting into many of those excrescences which have been already described.

If either of these warty excrescences appear jagged and divided like a cock's comb, they are called *cristæ*; and these are chiefly found about the crown and frænum of the penis in men, and under the lips of the pudenda, and about the anus, in women.

The excrescences hitherto mentioned are of a hardened substance resembling warts, and these sometimes appear without inflammation or other inconvenience, and disappear again without any application; but, as hath been already observed, they always return, and ought to be considered as warnings of an approaching pox, and proper measures should be taken to get rid of them, and avert the impending evil.

There are also other venereal excrescences of a more soft and fungous nature, which are in like manner denominated from their appearances; of these, such as are supposed to resemble the comb of a cock, are called also *cristæ*; if they are thought like unripe figs, *fici*; if ripe ones opened, *mariscæ*; when they are compared to mulberries, they are called *mora*; and by a variety of other distinctions, according to the real or fancied resemblances.

And these excrescences are troublesome about the scrotum and perinæum in men, and about the lips of the pudenda, the perinæum, and sometimes the anus, in women; and the latter case happening in either sex, they are apt to be mistaken for the

the piles, from which however they may in general be distinguished by the different colours, that of venereal excrescences being generally livid and cadaverous, and the hæmorrhoids being for the most part of a florid appearance; the former will also in some instances have an intermixture of yellow, and each head will seem to be filled with a kind of ropy matter, and to yield a thin, foetid, and bloody discharge.

The warty excrescences, first mentioned under the names of *verruca* and *porri*, may, unless in particular situations, be safely cut off with a pair of scissars, and the cerate before prescribed is said to be effectual for the cure; but if they appear to enter beneath the surface, so that any part of the horny substance remains after they are divided from the roots, the anti-inflammatory liniment is recommended to be applied on dossils of lint.

The application of mercurials is the only remedy for those excrescences which lurk beneath the skin; and for the purpose of removing them, they may be frequently touched with the strong mercurial oint-

ment, or poultices in which it hath been mixed may be laid on the part; the liniment last mentioned is also said to be efficacious: and the same methods may be pursued with respect to those which are of a softer and more spongy nature, and are highly preferable to caustics, corrosives, or ligatures, which were formerly much in use, though they were not only attended with immediate pain, equally excruciating and unnecessary, but with consequent inflammation, and after all never produced a radical cure, but left the roots to shoot out again, and call for a repetition of the same torments.

But a perfect cure of these disagreeable symptoms is not to be expected from any external applications; mercurial medicines, as before directed, must be administered, to clear the system of that infectious matter by which these excrescences are produced, and which may in most cases be done effectually by some of the courses heretofore described, without proceeding to actual salivation, which should in all possible cases be avoided.

C H A P. V.

Of Gleets.

UNDER this head we do not mean to confine ourselves entirely to gleets proceeding from venereal infection, but to consider also the nature and cure of seminal gleets arising from other causes, in men: of the *fluor albus*, or whites, in women, we shall treat in that part of this work which is set apart for disorders peculiar to the female sex.

A *gleet* is generally understood to be either the relic of a virulent gonorrhœa, a weakness occasioned by the violence of that disorder, or ill treatment in the course

of the cure; or to be produced by latent ulcers remaining in some of the parts where the gonorrhœa was seated.

In the former cases the gleet or discharge intermits, and differs from the matter of the virulent or infectious gonorrhœa, by being clear, transparent, glutinous, and ropy, and this running is perfectly innocent, and conveys no infection by coition; the discharge also in these gleets generally follows any such freedoms with the female sex as may tend to excite warm ideas; and any violent exercise or strain, even that of going

going to stool, will bring it on, but at other times the patient is tolerably free from it.

For the cure of gleans of the last mentioned description, astringent medicines are directed, and the following prescriptions may be applied to circumstances.

Take of gum olibanum, or frankincense, and the extract of Peruvian bark, of each one scruple—of simple syrup, enough to make a bolus; to be taken three times a day, drinking after each bolus a glass of Pyrmont water, with thirty drops of the saturnine tincture. Continue this course ten days.

Or, take of the Peruvian bark bruised, one ounce—of fresh galls bruised, three drams. Boil these about twenty minutes in a quart of water, strain off the liquor, and add to it, four ounces of the simple tincture of the bark, and give a small wine-glassful three times a day; adding to each glassful fifteen or twenty drops of the acid elixir of vitriol.

Or, take of the Peruvian bark in powder, three drams—of rhubarb in powder, one dram—of white resin powdered, two drams—of balsam of capivi, as much as will make the whole into an electuary; of which the size of a nutmeg may be taken twice a day, with a glass of Pyrmont water, and immediately forty drops of the following mixture on a lump of sugar.

Take of the balsam of gum guaiacum, balsam of capivi, and the vulnerary balsam, of each two drams. Mix.

If these medicines should disagree with the stomach, the following pills may be substituted.

Take of rhubarb powdered, half a dram—of compound powder of amber, one dram and half—of white resin powdered, one dram—of balsam of capivi, as much as will make the whole into thirty-six pills; two or three of which may be taken twice a day.

During a course of either of the foregoing medicines, the injection of sugar of lead and water may be used; to which may be added a few grains of white vitriol, as occasion may require: some recommend an injection of the following composition, though we apprehend the last mentioned is altogether as proper.

Dissolve half a dram of white vitriol in six ounces of water. Put it in a phial, and shake it before it is poured out for use.

But the most effectual remedy in all gleans, where there is no suspicion of remaining virulence, is the cold bath; and this ought never to be omitted, except in cases of weak or disordered bowels, or other intestines, when it cannot be used without danger: if the patient is of a full and sanguine habit, bleeding and purging may be proper before a course of bathing is entered upon; and after these precautions, it should be persisted in for at least a month. The proper time to bathe is in the morning fasting, and the patient should either plunge into the water over his head, or wet his head the moment he enters it; his stay in the water should not exceed two or three minutes, and his skin should be immediately rubbed dry with flannels.

The patient's food should in these cases be drying, and his liquors astringent; and for this purpose the waters of the Spa, Pyrmont, or Bristol, are recommended, with a mixture of port wine or claret.

But where the gleet proceeds from some latent or lurking ulcer, and though the inflammatory symptoms are entirely gone off, by means of the infectious particles having lost their stimulating quality, or the affected parts being accustomed to their operations, yet, from some appearance of the discharge, it is apparent that a degree of virulence remains, this case requires to be treated in a very different manner from those of which we have last treated, for

enough of the venereal taint remains, not only to lay the foundation of an universal corruption of the system, but in the present state to communicate infection, and produce by coition as compleat a virulent gonorrhœa, as if the heat of the urine, pain in the urethra, and all the symptoms of inflammation, actually existed.

And whenever the gleet continues after the use of the medicines prescribed in the former part of this chapter, well-grounded apprehensions arise that it proceeds from ulcers, and the complaint will hardly be removed without having again recourse to mercury, and such other medicines as are calculated to correct the acrimony of the juices.

To effect this purpose, the following prescription has been offered.

Take of Venice turpentine, half an ounce; boil it till it is of a fit consistence for pills, then add of calomel half a dram. Make the whole into sixty pills, of which from four to six, according to habit and other circumstances, may be taken morning and night. If the mouth should grow sore, or the breath offensive by the use of these pills, they must be discontinued for a time, or the number lessened till these symptoms are not produced.

During the use of these pills, a decoction of the woods, such as guaiacum, sarsaparilla, sassafras, china, or the like, should be drank; to the quantity of a pint and half, or a quart, daily.

Bougies, introduced into the urethra, of such compositions as are adapted to the purpose, will be of considerable service in the cure of ulcers in this passage; they will be required to remain there a considerable length of time, and may either be rubbed with sweet oil or mercurial ointment, to facilitate their admission.

A *seminal gleet* may arise from an excessive indulgence of venereal pleasures, from stimulating provocatives, or from a private

vice, of a nature equally sinful and debilitating; it may also be brought on by a variety of accidental causes, such as very violent labour or exercise, lifting weights above the strength of the body, or other strains, even those which happen in voiding the stools where the patient is habitually constive: violent medicines, such as hot clysters, sharp purges, and strong diuretics, may also produce this complaint; or it may be occasioned by epilepsies, convulsions, or involuntary nocturnal emissions, whether from dreams or other causes.

In the approaches of this disorder there are no symptoms of actual pain, except a weakness, and a dull uneasiness in the loins and about the neck of the bladder; the semen or seed passes away insensibly, and particularly in going to stool, or using the smallest force with the body; the erections, though frequent, are not vigorous; and the semen is too easily ejected, and is thin and of a bluish cast.

After this disorder has continued some time, the penis becomes heavy and useless, the testicles hang lower than usual, and grow heavy and troublesome; a pain takes place in the loins and at the lower extremity of the back-bone, which by degrees makes its way up the back; the calves of the legs diminish; the patient's eyes grow dull and weak; he has a sense of weight in his head, and a ringing in his ears; his breath grows short, especially after exercise; a slow and wasting fever comes on, with continual pains in the head, back, breast, and bowels, attended with thirst and universal weariness and disinclination to motion; at length his spirits grow dejected, his memory fails, his sight decays, or an incurable *gutta serena* deprives him of it totally, and an hectic closes the scene.

In the cure of this disease, regimen and medicine are of equal importance: the diet should be light, cordial, and extremely nourishing, and it should be taken frequently, but in small quantities at a time; the

the patient should retire to rest early in the evening, breathe a dry, pure, and mild air, and use gentle exercise on horseback or in a carriage.

The medicines should be moderately cordial, and such as increase the heat of

the body; and generally those which we have already prescribed in the preceding part of this chapter, to which may be added the preparations of steel, and bitters: cold bathing will also in this case be attended with peculiar advantage.

CHAP. VI.

Of the Lues Venerea, or Confirmed Pox.

THE venereal disorders, of which we have hitherto treated, are such as, having arisen from infection recently communicated, are supposed to be generally confined to the parts where it was received, or to those which are in immediate contact with them: we are now to proceed to another class of venereal disorders springing from poison actually received into the blood, and which being carried by the circulation to every part of the body, is mixed with the several secretions, and taints the habit universally.

The first symptom which is felt of this universal infection, is a kind of slight, irregular, intermitting fever, with dulness, heaviness, weariness on the smallest motion, and unusual oppression of the spirits, and this followed by slight but increasing pains in the head, joints, and limbs; the symptoms are not constant, but are more usually attendant when the patient is warm in his bed, and where, instead of enjoying the comforts of sleep, he lies restless, disturbed, and uneasy, till, from mere fatigue, he falls asleep towards the morning, and awakes unrefreshed and unrelieved.

The head-ache now becomes more frequent and acute, sometimes affecting different parts of it, and sometimes fixed to one spot, which seems as if it was pierced with an instrument, and by degrees little lumps are perceivable on the skull, and

on the bones of the arms and shins; the joints also grow painful, and the patient is scarce ever free from the torment of some one or other of the disagreeable symptoms.

A branny scurf now begins to gather on different parts of the body, and more particularly on the head, originating generally in the forehead and about the eye-brows, and creeping by the temples throughout the whole scalp, and down to the neck; meantime, the eyes are affected with itching, redness, soreness, pain, and sometimes total blindness; the scurfy eruption spreads farther about the face, and reaching the ears, fills them with stinking, sloughy matter, instead of wax, which, corroding the organs of hearing, occasions a tinkling and ringing in the ears, a dull pain in the temples, and a defect in the sense of hearing: as these eruptions increase in extent and virulence, the corners of the mouth and nostrils harden and crack, and the lips of those cracks fester, grow callous and hard, and emit a thin, acrid, and corrosive humour.

As the disease increases, the skin of the whole body becomes rough, and covered with a kind of scales like bran, of a yellowish colour, and attended with alternate itchings and burnings; the eyes grow more red, and seem dull, heavy, and fixed; the countenance changes to a livid colour, and appears bloated and scaly, and covered with blotches and fiery pimples; the tonsils of the

the throat swell, become hard, and are affected with a dull throbbing pain; the neck grows hard and stiff, and inflammatory tumors of various sizes are interspersed among the glands and the muscles of the upper part of the breast and shoulder-blades; the mouth begins to grow sore, and the cheeks within are covered with eruptions of a very inflamed appearance; the tongue swells, and is covered with a slimy slough, or a hard and rough crust; the palate and throat also swell and become sore, and the roof of the mouth is studded with hard pimples and lumps; the size of the nose is increased, the nostrils appear wider than usual, and are stopped up with a scabby slough, or emit an acrid and corrosive humour.

In this state of the disease the head beneath the hair grows crusty and hard; the hair changes from its natural colour to grey or white, and falls off by degrees; the wrists, hands, and fingers, grow stiff and swelled; the nails extend, become thick, and grow rough and yellow, and at length fester and fall off; the tumors in the glandular and muscular parts, as well as those which arise from the bones, become pointed and inflamed, and emit a tough glewy matter, which spreads over the surfaces of these excrescences, and covers them with the same kind of bran-like scales with which the other parts of the skin are affected; the bones swell, particularly at the joints, grow brittle at the spongy parts, and break with the smallest violence, and the knots at the joints become inflamed, stiff, and sore; the ulcers about the throat creep gradually by the palate towards the bone or cartilage of the nose, which they corrode and destroy; the voice is oppressed with hoarseness, the speech almost unintelligible, the breath grows short and difficult, the mouth seems to be half closed and fixed in that situation, the breath intolerably foetid and offensive; and, as the body becomes loathsome, and the pains in-

sufferable, the mind suffers its share of anguish, and both sink together under the accumulated load of disease and despair.

But the misery is not to end here: besides all the symptoms attending a virulent gonorrhœa, such as shankers, phimosis, paraphimosis, and the various excrescences which we have already described as attendant on that disease; if the patient should labour under complicated infection, or the pox should have arisen upon the foundation of a gonorrhœa, the patient will be visited with buboes, which will become hard, cancerous, or schirrhous, and having fistulous communications with the ulcers among the muscles, will extend the ulceration to all the neighbouring parts.

Fevers now attend of various kinds, and distinguished by different symptoms; sometimes with chills and shiverings, at others with intense heat and violent thirst; the pulse varying with the complaint, being at one time full and heavy, at another low, irregular, and intermitting: sometimes the patient is afflicted with wasting sweats, and an irksome palpitation of the heart; at others he is affected with an universal tremor and weakness, dimness of sight, giddiness, and faintings.

As the crisis draws on, a gnawing and racking pain is felt through the whole head, and in each particular part of it; that of the bony parts is sharp and grinding, and in the fleshy, muscular, and softer parts, burning heat and other aggravated symptoms of inflammation take place, accompanied with a scalding dysentery, a difficulty of making water, or a total suppression of urine; and painful speech, swallowing, and breathing.

In the last stage, the tumors, knots, and ulcers, of all denominations, crack, split, and burst open, and the whole body seems to be in a state of almost confluent ulceration; the swellings on the head break, and form wounds flowing with a foetid and acrid matter; the nose ulcerates, and the cavities

ties of the nostrils are filled with venereal excrescences; the eyes are clogged with matter, and sometimes appear also in an actual state of ulceration; the ears run with a fœtid humour; the ulceration of the mouth corrodes the roof of it, and opens a wide passage into the nose; the throat is ulcerated both within and without; the teeth grow loose and fall out; the breath becomes equally offensive to the patient himself and those about him; the excrescences or tumors on the bones ulcerate; and the bones themselves grow brittle in every part, are affected with rottenness, and exfoliate or shell off, emitting a sharp and acrimonious fluid.

From this period all is horror: the whole frame becomes putrid, loathsome, and corrupt; the very limbs mortify and drop off; till at last the poison seizes the vitals, and finishes a life of insupportable anguish, and disgraceful misery.

In the female sex this disease is attended with other peculiar circumstances. Women are liable from it to suppressions, or immoderate discharges of the periodical evacuations; to the fluor albus, or whites; to hysteric fits; to cancers in the breast, and to the same disorder, together with other abscesses, ulcers, inflammation, scirrhus, and mortification, of the womb: those who labour under this disease are in general barren, or subject to abortion; a happy circumstance, as the children produced from such habits come into the world deformed with ulcers, affected with rottenness, and covered with foul eruptions.

Such are the symptoms of a malady imprudently and disgracefully contracted, and in a state of neglect or mismanagement: and much does it behove mankind, and young persons of both sexes especially, to attend to the alarming catalogue, and consider before it be too late the dreadful consequences that await an unlawful indulgence of those passions which were inspired by the Almighty for purposes of wisdom

and mercy; and which, directed to proper ends, are equally conducive to health, happiness, and reputation; but being turned into the channels of vice, produce disease of body and depravity of mind, and unfit the wretched victim of his lusts for the comforts of society, or the pleasures of an intercourse and communication with the world.

But though every one of the symptoms we have enumerated may not unite in the same person, yet they are all attendant on the disease in it's different stages and progressions; and unless the infection is combated by proper remedies, or death stops the course of the disorder, they will all or most of them approach in their turns, and render the miserable sufferer the spectacle we have just described.

For the cure of this disease, as well as every other species of venereal infection, mercury, as we have already observed, is the only effectual remedy, the administration of which may be directed in a great variety of forms: till within a very few years the radical cure of this very confirmed state of the disease hath been supposed to be confined to a salivation, the methods of raising and treating which are as follow.

Previous to this operation, it will be necessary to prepare the body for a few days by a spare diet, and in sanguine or full habits bleeding will be proper; after these precautions the patient should go into a warm bath for two or three successive days, keeping himself constantly in a warm room, and wearing a flannel shirt.

When this preparation has been made, let the patient with his own hands rub in, every night before a fire, two drams of the strong mercurial ointment, beginning at the ancles, and rubbing upwards to the knee, then round the joints, and successively to the thighs, covering the parts anointed with worsted stockings and flannel drawers: after an ounce of the oint-

ment has been thus used, it will be advisable to wait the effect of it, and so to proceed gradually, that the salivation may not be produced too suddenly; to this end, if the mouth begins to swell and be sore before the whole ounce of ointment has been rubbed in, the quantity may be lessened to a dram of it in the twenty-four hours.

It sometimes happens, that more than an ounce of the mercurial ointment will be required to raise the spitting; but as it is always desirable to bring on the salivation without occasioning any swelling of the head, it will be prudent to attend carefully to the approach of that symptom, as the great object in this case is to raise the salivation slowly and gradually, and to let it go off in the same way.

Except in very strong constitutions, from a pint to a quart is a sufficient discharge of saliva in twenty-four hours; and this may be continued from two weeks to four or five, according to the habit of body and the state of the disease; during which time the patient's strength must be supported with plenty of light and nourishing diet, and he should, at the most, every three hours, drink a pint of gruel, of the decoction of mallows and liquorice mixed with milk, or of barley-water with gum Arabic dissolved in it: if the discharge weakens him too much, or occasions fainting, he may now and then take a little white wine whey, or even spiced wine or ale, but in small quantities.

After the spitting has been lowered by degrees, and carefully, but by no means suddenly stopped, such gentle purges as the following will be proper.

Take of the infusion of fenna, two ounces—of tincture of fenna, three drams—of the diuretic salt, half a dram—of syrup of roses, one dram. Make a draught, to be taken in the morning occasionally as circumstances require.

If the salivation continues longer than is

necessary, it may be checked by repeating the same mild purging draught.

It sometimes happens that the mercury does not produce the desired effect, and no symptoms of salivation appear, even after a considerable quantity has been rubbed in: in these cases smart vomits should be given; for which purpose four or five grains of the turbith mineral is recommended, which should be worked off with plenty of warm gruel, chicken broth, or whey.

If the mercury should run off by stool, and occasion a diarrhoea, the following bolus is directed.

Take of diascordium, one scruple—of the compound powder of bole, without opium, half a scruple. Make a bolus, to be taken immediately, and repeated as circumstances may direct, with three or four spoonfuls of this julep.

Take of simple cinnamon water, three ounces—of spiritous cinnamon water, half an ounce—of the japonic tincture, one dram and half. Mix.

And in this case the patient is advised to use the white decoction as his common drink; to make which—

Take of calcined hartshorn prepared, two ounces—of gum Arabic, two drams—of water, three pints. Boil till it is reduced to a quart; let it settle, and strain or pour it off fine.

If the looseness should be attended with violent griping pains, the following clyster may be administered.

Take of the white decoction, eight ounces—of opium dissolved, two grains. Make a clyster, to be given moderately warm.

After which the patient should take a small quantity of red wine heated with spices.

If the salivation rises so suddenly as to occasion danger, bleeding, and purging clysters, are recommended.

A sali-

A salivation may also be raised by the internal use of mercurials; and five grains of calomel, given in a bolus every other night, will in general answer this purpose.

After a salivation, the following decoction is advised to be drank, to the quantity of three half pints or a quart a day, for three weeks or a month.

Take of the root of sarsaparilla bruised, four ounces—of ginseng root bruised, half an ounce. Boil them in two quarts of water over a gentle fire, till it is reduced to one quart; when it is cold, strain it for use.

When the mouth remains sore after salivation, the following gargle may be used.

Take of red wine, half a pint—tincture of myrrh and common honey, of each half an ounce. Stir the whole well together.

Or, take of the mucilage or jelly of quince seeds, two ounces—of tincture of roses, one ounce.

To make the tincture of roses—

Take of red rose-buds, the white part being cut clean off, half an ounce—of strong spirit or oil of vitriol, one scruple—of boiling water, one quart and half a pint—of refined sugar, one ounce and half. Mix the spirit of vitriol with the water in a glass or glazed earthen vessel; steep the roses in the mixture, and when the infusion is cold filter it and add the sugar.

But though, in compliance with a practice which is still in a degree continued, and may in some instances be necessary, we have given full directions for raising a salivation, and for the treatment and management of the patient under that operation; yet this method of cure daily loses ground, and other modes of administering mercury are adopted, equally efficacious in the expulsion of the venereal infection, however great it's progress, or violent the symp-

toms occasioned by it; without being productive of the danger which follows the discharge by the salivary glands, and the inconvenience which always attends this course.

Mercury, given as an alterative, will unquestionably remove every venereal symptom, where any hope of cure remains; and for this purpose the common mercurial pill may be taken every day, or every other day, in greater or lesser quantities, according to the effect it produces, the constitution, and the degree of violence with which the disease prevails: great attention must be paid to the operation of the medicine, and if any tokens of approaching salivation appear, the use of the pills must be discontinued for a day or two, and a gentle purge or two taken, after which the course of pills must be resumed under the same precautions.

It is impossible to ascertain the quantity of mercury necessary to effect a cure; this must depend wholly on circumstances, and the administration of it must be stopped or continued, as the venereal symptoms appear to yield to the medicine or remain obstinate.

The following preparation of mercury hath also been used with the highest success.

Take of corrosive sublimate, two grains; dissolve it in four ounces of French brandy. Take a common table-spoonful, to the amount of half an ounce, varying the quantity according to age, constitution, and other circumstances, twice a day; and after each dose half a pint of the decoction of sarsaparilla. British malt spirit may be substituted for brandy.

The corrosive sublimate may be dissolved in water, in the proportion of five grains to half an ounce of water; and of this solution the patient may take from fifteen to thirty drops night and morning, in a table-spoonful of brandy or other spirits;

rits; or the proportionable quantity of mercury may be given in the form of pills.

Mercury is also prescribed as an alterative in the following form.

Take of calcined quicksilver, from half a grain to two grains—of precipitated sulphur of antimony, five grains—of opium, from half a grain to a grain—of conserve of hips, enough to make a bolus. To be taken every night going to rest.

With the use of this bolus, the following decoction is also recommended.

Take of the root of mezereon, two drams—of the root of sarsaparilla, three ounces. Boil them over a gentle fire in two quarts of water till half is consumed, and take half a pint three or four times a day.

With the course last mentioned, warm bathing is advised, and the continuance of the medicine and decoction ten days or a fortnight after the venereal symptoms have disappeared.

The following course of medicines has also been offered as certainly efficacious in the cure of this disease in it's most aggravated state.

Take of rectified spirit of wine, four ounces—of the Canada balsam, half an ounce—of gum guaiacum, half an ounce—of oil of sassafras, one dram—of corrosive sublimate, ten grains. Dissolve the mercury in half the spirit of wine, and in the other half the Canada balsam and gum guaiacum: when the latter are compleatly dissolved, shake the bottle well; then let it subside, and pour off the clear liquor very carefully; then mix this with the mercurial solution, and add to the whole the oil, which will immediately incorporate if it is pure.

Of this tincture the patient is directed to take from ten drops to twenty, according to circumstances, night and morning, in a glass of wine, or wine and water, and to continue it till no venereal symptom remains.

To accompany this medicine, the following medicated ale is recommended to be taken as a common drink, both at meals and at other times when the patient is thirsty.

Take of malt, one pound—of sassafras root sliced, half a pound—of water, a gallon. Boil the whole together half an hour; let it stand till it is cold, then pour the liquor off carefully, and bottle it for use.

And this drink is by some preferred to the decoction of sarsaparilla or other woods.

During this course, all eruptions, excrescences, and other external appearances, are to be treated as directed in the virulent gonorrhœa; and when the scurf or scab about the head and face becomes so hard and crusty, as to be extremely troublesome and likely to crack, the following liniment is recommended.

Dissolve ten grains of corrosive sublimate in four ounces of water, and add to it one ounce of the saponaceous liniment. Shake the whole well together before it is used. Dip a soft linen rag in the mixture, and apply it frequently to the part.

When the glandular parts are affected with ulcers, the same methods are advised for the dispersion; or, if that cannot be effected, the suppuration, opening, and healing them, as have already been prescribed in cases of buboes.

In case of ulcers in the mouth and throat, the following gargle is offered.

Take best vinegar and rose water, of each four ounces—purified nitre and common alum, of each two drams—of honey, half an ounce—of corrosive sublimate, five grains. Dissolve the mercury in the rose water, and mix all together.

For excrescences and ulcerations in the nose, or those parts with which it communicates, a powder has been recommended to be taken occasionally by way of snuff.

Take

Take of the flowers of lavender, one ounce—of the root of Florentine orrice, half an ounce—of calomel prepared with water, two scruples. Reduce the flowers and orrice to a fine powder, afterwards powder the calomel separately, and then mix the whole well. A pinch of this, snuffed up occasionally, is said to operate very effectually for the removal of those inconveniencies.

And when the eyes are affected, this water has been advised.

Take of water distilled in a glass alembic, four ounces—of corrosive sublimate, one grain. Shake the bottle. Let it stand twenty-four hours, and pour it off cautiously, so as not to disturb the sediment, and drop a single drop into the eye occasionally, lowering it with water if it is too corrosive.

Many other prescriptions might be offered, which are adapted to particular symptoms; such as a caries or rottenness of the bones, gangrene, mortification, and ulceration of the spinal marrow: and directions might be given for various operations which the desperate state of the patient, in the most cruel and aggravating circumstances of this disease, may render necessary to the preservation of life; such as the amputation of the penis, the extirpation of a scirrhus or mortified testicle; laying open an imposthume, abscess, or fistula, in the perinæum, and the like; but as the case must be dangerous when either of the first mentioned symptoms make their appearance, and as no operation can be performed with safety without the assistance of a skilful surgeon, we apprehend such prescriptions and directions will be needless in this work; indeed, we venture to assert with great confidence, that a due attention to the treatment which has been recommended in every venereal case, will effectually prevent this disease from making it's progress to the deplorable state in which only they can be useful; for we do not entertain a doubt but that an alterative course of mer-

cury, in either of the forms before prescribed, (among which we conceive the solution of corrosive sublimate in brandy or other spirit is to be preferred) will infallibly eradicate every particle of venereal infection; and, if taken in time, prevent the worst and most disagreeable consequences of this subtle poison.

But though the good effect of mercury in the removal of these diseases admits not of a shadow of doubt, yet it is necessary to caution our readers against expecting it to operate as a charm, or forming ideas that the swallowing a certain quantity of this medicine, without precaution or discrimination, will answer every purpose; and that, under the protection of this powerful remedy, they may indulge in accustomed freedoms, or riot in extraordinary excess; that it may be taken at all times and seasons, and by persons of all habits and constitutions, without particular limitation or distinction; and that, however often repeated, it's operation will be equally safe and certain.

The fact is, that mercury is at all times to be administered with scrupulous and cautious deliberation, and that there are many cases in which it cannot be administered at all without previous preparation; and others, where the quantities must be varied according to particular circumstances, and the use of it intermitted, and that, perhaps, several times, in attempting a single cure.

For instance, if a violent, acute disease of any kind, should have reduced the patient's strength, or it has otherwise been exhausted by natural or accidental causes, it would be extremely imprudent to begin a course of mercury till the habit has been restored by regimen and medicine; or if, in the course of curing a venereal malady, the patient should be attacked by a putrid or burning fever, pleurisy, inflammation of the lungs or intestines, or other sharp and critical disorder, it would be madness

not to discontinue the mercurial course till the new invader of the patient's health has been expelled, by means which however well calculated to answer that purpose, might prove totally incompatible with the use and operation of mercury.

Mercurial medicines should by no means be administered during the continuance of the female periodical discharge, nor in the latter stages of pregnancy, if it can possibly be avoided: in the latter case, if the circumstances are pressing, they should be given in smaller quantities, and less frequently than usual; but, unless there is a probability that the child may also receive benefit from them, it is more safe and advisable to postpone their use till after delivery.

In the administration of these medicines, children and persons advanced in years are to be treated alike; the quantities necessary to produce a proper effect in strong, robust, and vigorous constitutions, would occasion a salivation in unsettled, delicate, or debilitated habits, and the effect mercury may have on aged persons is always uncertain; the same dose will at one time operate with surprizing violence, and at another appear to be wholly inactive and inefficacious.

In some chronic diseases, mercury may be admitted without the smallest risque; in others it should be given with a sparing hand, and with infinite caution: those who are afflicted with nervous diseases, who are subject to excessive intestinal discharges, to violent and often repeated fits of convulsion or epilepsy, or to scrophulous or scorbutic tumors or eruptions, should refrain from mercurial medicines till these disorders are removed; but the same caution is not necessary in asthmatic complaints, stone, gravel, rheumatism, or dropsy.

Previous to the commencement of a course of mercury, some preparation is necessary; in some instances bleeding will be proper, which will be directed by the

fulness of the habit; and the repetition of the operation must be governed by the patient's age, strength, and constitution: gentle purges should never be omitted, but this evacuation may be required to be more or less frequent, according to the particular circumstances of the case. It is also requisite, that the patient should alter his usual course of living, both with respect to food and liquors, which should be light and cooling: if he is accustomed to use violent exercise, or severe labour, both should be discontinued before a course of mercury is entered upon; and he who expects to reap the advantages of this medicine, must be as attentive to the operations of the mind as of the body. Internal agitations act more forcibly in opposing the good effects of alteratives of all kinds, than the most active exertions of the body.

And, during the use of mercurials, a regimen still more strict will be required; yet this is in general more difficult to be complied with than the most exact regularity in taking the medicines: alterations in diet, and additional warmth, both which are indispensibly necessary, will naturally occasion observation and suspicion, and as many circumstances frequently concur to make it desirable for the patient to conceal the situation of his health, he is too apt to flatter himself, that he may depend on the efficacy of the medicine alone, and disregarding the necessary accompaniments of living low, and avoiding extremities of cold, exposure to wet, or other inclemencies, instead of being benefitted by it, incurs mischief, and gets rid of a few of the immediate symptoms, at the expence of a dreadful catalogue of future evils, which sooner or later appear in the shape of ulcers in the throat, scirrhus testicles, fistulous or cancerous ulcers, aching and too often rotten bones, putrid and offensive breath, hectic, consumptions, and, worse than all the rest, a perpetuation of disease in a wretched offspring, on whom the sins of the

the father will be probably visited, even farther than to the third and fourth generation.

Another rock on which the too credulous patient is liable to split, is an earnestness to get rid of the disease too speedily. Necessity frequently, convenience always, makes it desirable to obtain a cure with the utmost expedition; and to this end, he takes his medicines too hastily, and leaves them off much too early: if men would be convinced, that it is more safe to continue the use of them a month too long, than to discontinue them a day too soon, consequences of a very fatal nature would often be avoided. If the poison is not totally expelled, the disease breaks out afresh, the symptoms are always aggravated, and new ones commonly occur; the patient is obliged to resume the course of medicine, but the same impatience prevails, he stops short of the cure, and by repeated indiscretions of the same kind, eventually ruins his constitution, and entails misery on himself and his posterity. We would earnestly recommend to such of our readers as may unfortunately or imprudently incur this disease, to begin a course of mercurial medicines by small doses, to raise them by degrees to the largest quantities we have prescribed in the several different circumstances, and when the venereal symptoms disappear, to lessen the doses gradually, both as to quantity and frequency; extending, however, the use of moderate ones a considerable time beyond the appearance of indisposition.

Nor is this the only error into which the unhappy patient is apt to lead himself: by a train of argument founded on his own convenience or inclination, but unsupported by the smallest degree of reason, he persuades himself, that the disease once cured, his health is compleatly restored to its original state; that a fresh infection, in like manner removed, leaves his constitution in the same plight as at the attack, and that as long as he continues effectually to

expel the poison, it is of no importance how often he receives it.

This is a fatal mistake, to which many a good constitution hath been foolishly and wantonly sacrificed; in the second attack of the venereal disease, whether it be a virulent gonorrhœa or confirmed pox, the symptoms constantly affect the same parts as have been the seats of the disorder in the first infection, and this happens as often as the disease occurs; hence it is obvious, that repeated ulcerations, excoriations, tumors, or excrescences, must of consequence weaken and destroy the vessels, muscles, or glands, among which they are formed or take place, and as the whole system suffers from the injuries received in a particular part, it follows of course, that the second infection will be more pernicious than the first, the third than the second, and so on in an increasing scale of destructive operation, till the whole frame is involved in the calamity, and the infatuated sufferer incurs the punishment of his own folly and temerity, and discovers, too late, that he has trifled with the blessings of Heaven, and awaking from his dream of security, finds the powers of medicine ineffectual to restore a weakened and debilitated habit, and re-establish a broken constitution.

When, from either of the last mentioned causes, or from neglect or mismanagement, the venereal taint has spread itself through the whole body, and corrupted the blood universally; and when the habit is so reduced by the disease, as to be unable to support the effects of mercurial medicines, regularly administered in the manner we have prescribed, other methods must be adopted; decoctions of the woods, and a milk or vegetable diet may be tried, and as strength is restored, the mercury must be given in small doses, and at intervals, by which means, the more dreadful effects of the venereal infection may be prevented, till the patient's constitution is so far improved

improved as to admit of a proper course : under this kind of treatment, those who have been reduced to the gates of death, have been rescued from the grave, and almost miraculously brought back to health, strength, and vigour ; and habits, which have appeared shattered and worn down with hectic or consumptions, have been perfectly restored by such simple and easy rules as we have just now offered to our readers.

Before we quit this unpleasing subject, it may not be improper to take a short retrospect of the doctrines we have advanced, with respect to the treatment and cure of the venereal disease in it's several states and stages, and to throw together in a few words the general plan which we recommend.

The first object of attention is cleanliness ; without the practice of this necessary precaution, the best prescriptions will be offered, and the most efficacious medicines administered, in vain. Slight infections are frequently removed by a due regard to this article, in external washings and frequent injections ; and if this method was pursued whenever any suspicion was entertained of infection being received, it would probably, in many instances, prevent the venereal poison from taking effect at all. Water, with a small addition of spirits or oil, and warm milk and water, are almost always at hand, and as the use of them is attended with little trouble and no inconvenience, it is astonishing that men, devoted to their pleasures, should lose such fair opportunities of preserving health on easy and reasonable terms.

When the symptoms of infection first make their appearance, they are always accompanied by more or less of inflammation ; to remove or lessen which, bleeding or gentle purges will be necessary ; in full and robust habits both : the former must depend on circumstances, the latter is indispensable.

When by these means the inflammation is removed, the course of mercury should commence, and as we advise it's being given as an alterative in all possible cases, the patient, or those about him, should strictly observe the operation of the medicine ; and if, from the swelling of the head or great soreness of the mouth, a salivation is apprehended, the doses should be reduced in quantity, and either given less frequently, or wholly intermitted for a time, as the continuance or abatement of the last mentioned symptoms may direct. If a spitting should have actually commenced, great care is necessary in stopping it, which can only be done with safety by discontinuing the mercury, giving the patient a smart purge or two, and keeping him rather warmer than usual.

During a course of mercury, regimen is of very great importance ; the patient should abstain as much as possible from flesh meats of all kinds ; spoon meats, milk, and vegetables, are the proper food ; salted, dried, seasoned, or spiced meats, are extremely pernicious : nor is less caution required with respect to his liquors, spirits of all kinds are inadmissible, and the less wine the patient drinks the better ; at any rate, if he indulges in this way, the wine should be diluted, for whatever adds to the inflammation increases the difficulty of the cure.

The patient should also guard against cold, wet, or exposure to sharp winds ; a cold taken at this time retards the cure exceedingly, and frequently brings on additional, disagreeable, and obstinate symptoms : flannel drawers, and a waistcoat of the same materials next the skin, should be constantly worn by persons in this situation, and particular regard should be paid to the feet, which ought always to be kept dry, and covered with woollen stockings.

The air has certainly considerable influence in accelerating or delaying the cure of venereal diseases ; instances have frequently

quently occurred, where patients, and especially in the confirmed pox, have received no benefit from a judicious course of mercurials whilst they have remained in cities or great towns, yet the moment they have been removed to a pure and dry air in the country, the medicines have taken effect, the amendment hath been almost immediately perceivable, and the cure hath been perfected without farther difficulty.

In the article of exercise, some regulations are necessary: walking, or riding on horseback or in a carriage, occasion a commotion and friction of the diseased parts, and are therefore prejudicial; the less motion, and particularly of a violent nature, the patient uses, the more speedily he will in all probability get rid of his complaints.

Above all, it behoves those who are visited by this reward of their faults or follies, to resist the flattering ideas of a cure being compleated in a shorter time than reason or circumstances will admit: it is not enough that the symptoms abate, or even that they wholly disappear; both frequently happen before the virulent matter is totally expelled, and the smallest remaining particle will be sufficient to light the flame afresh, when it is no longer resisted by the administration and operation of medicine.

We have, therefore, advised a continuance of the mercurials a fortnight, three weeks, or even a month, after all the appearances of venereal infection are vanished; but they need neither be administered in the same quantities, or so frequently as before, nor should they be left off suddenly: prudence will guide the patient's management in this particular, better than any general directions, which cannot be suited to all cases.

In the decline of the disorder, during the continuance of the mercurial course, and even for some time after it has ceased, the patient may drink freely of infusions or decoctions of some of the anti-venereal

simples; and for this purpose, either of the following may be used, and will answer the purpose of eradicating any lurking remains of the disorder, and of producing a favourable alteration of the blood and juices.

Take of fresh sarsaparilla root sliced and bruised, four ounces—of the shavings of guaiacum wood, two ounces—of raisins of the sun sliced and bruised, four ounces—sassafras and liquorice roots, of each one ounce—of water, six quarts. Boil the sarsaparilla, guaiacum, and raisins, in the water, over a slow fire, till one half the liquor is consumed, adding towards the end of the boiling the sassafras and liquorice. Let it stand till it is cold, then pour or strain it off fine.

Or, take of the fresh bark of mezereon, one ounce. Boil it in one gallon and half of water till it is reduced to a gallon, and towards the end of the boiling add an ounce of sliced liquorice root. Strain or pour off as before.

Having now performed the disagreeable task of treating very copiously of disorders which are in most cases the fruits of folly, intemperance, and vice; and having pointed out the various symptoms which mark the different stages and species of these complaints, and offered plain, easy, and rational methods of cure, adapted to most cases that can possibly occur; we shall conclude the present Chapter and Book with some few observations which necessarily arise from the consideration of these prevailing and destructive diseases.

In the first place, we earnestly recommend to our readers of both sexes, and particularly to those whose youth and inexperience may render them most liable to the dire evils we describe, an attentive perusal of the dreadful catalogue of symptoms attendant on these diseases in their different degrees and appearances. Let them figure to themselves the loathsome object of this foul contagion, rendered equally useless and obnoxious to society, and creeping

about the world covered with sores, ulcers, and offensive eruptions; his eyes sunk, weakened, and inflamed; his hearing impaired, his teeth loosened, his breath foetid, his strength exhausted, and his faculties clouded or confused: let them hear him complain of insufferable pains by day, and unremitting torments by night; let them remark, that his wretched case is unlamented and unpitied, that he is avoided by all but those who from interest or obligation are compelled to minister to his wants, and that even the former companions of his vices desert him, and leave him a prey to the complicated horrors of his disease and his own reflections.

Let them compare this dreadful spectacle with the health, vigour, and bloom of youth; the erect form, the manly tread, the lively and penetrating eye, the quick apprehension, and the universal sprightliness and alacrity, of the untainted and uncontaminated youth; and let them ask themselves, if the gratifications of sense, or the indulgence of the passions, are worth purchasing at the price of such a contrast.

Nor let the licentious voluptuary conceive, that the picture we have drawn of the effects of this disease is in the smallest degree aggravated; if he doubts the truth of the colouring, let him resort to the hospitals, and other public receptacles of the victims of venereal poison, and he will soon be satisfied that we have not dealt in exaggeration; on the contrary, he will find, that the portrait falls short of the wretchedness experienced by many miserable originals.

If the votary to pleasure should be tempted to believe that, because we have pointed out plain, easy, and certain me-

thods of cure for every appearance and stage of this disorder, he may therefore indulge in the unlawful pursuits of lust without restraint; and that, if he incurs the severest effects of his vices, he has nothing to do but to lay by for a while, and take a few pills, boluses, and draughts, and all will be well again; he will find himself wonderfully deceived: each repetition of the disease renders his constitution less capable of bearing it, and the effect of the medicine less certain. Instances are not wanting of men who have been so habituated to the use of mercury, that it has ceased to be efficacious, or has at least acted so slowly, that the disease has proved fatal before the operation of the medicine has been powerful enough to resist its progress.

Nor can we omit to remark, that the loathsome consequences of venereal taints seem to be the immediate effects of Divine vengeance against those who pervert the natural passions, and genuine sources of pleasure, to the purposes of gratifying depraved, vitiated, and abandoned appetites; who, rioting in libidinous excess, forego the rational enjoyments of life, and pursuing the shadowy and unsubstantial joys of variety, through the foul and muddy channels of vice and intemperance; entail on themselves immediate disgrace, consequential disease, disagreeable reflections, and the displeasure of that Being who formed the different sexes for the comfort, assistance, and delight of each other; and who cannot, without being offended, behold them communicating misery and anguish, instead of mutual love, tenderness, friendship, and affection.

BOOK VI.

Of Indispositions and Diseases peculiarly incident to the Female Sex.

CHAP. I.

Of the Constitutions of Women.

FROM the different formation of the bodies of males and females, it seems evident that the latter were by Nature ordained for those employments which require less exertions of activity and resolution; and that the domestic engagements of superintending the œconomy of a family, and providing for wants which arise within that sphere, are expressly adapted to the degree of bodily strength and mental fortitude with which the weaker sex have been endowed by the great Disposer of all things.

Yet we apprehend the ideas of this distinction have in some instances been carried beyond the bounds of reason: those of the softer sex, whose situations in life expose them to an increased proportion of labour and hardship, are in general robust, vigorous, and healthful; whilst those who, from the delicacy annexed to rank and fortune, or from a destination to avocations of a sedentary nature, use little exercise, and are confined to the house for the greater part of their lives, are weak, sickly, and puny: a degree of exercise is required for the preservation of health in both sexes, and all conditions; it is only necessary that it should be allotted to each in due and fit proportions.

Nor is it to want of education alone that we are to attribute the inequality of talents, which has been so much the subject of remark in the female sex: vigour and strength

of mind are accompaniments of health and a good constitution; hence those who, for want of air and exercise, are relaxed and enervated, seldom possess strong or lively understandings; the same causes which produce obstructions, indigestions, windy complaints; and abortions, occasion fears, apprehensions, lowness of spirits, and incapability of directing the mind to study or science: the whole train of nervous complaints are brought on by a sedentary and inactive life, and the immediate connection of the nervous system with the seat of sense, will account for any defect of understanding, or want of genius or talents, in those who are subject to any of these disorders.

To preserve in women constitutions proportionably robust with those of men, the labour or exercise should be also proportioned; the plough and the thrashing-floor are too laborious, and perpetual application to the distaff or the needle too sedentary: those seem to enjoy the highest health, to go through the painful and laborious seasons of pregnancy and child-bearing with least difficulty, and to produce the strongest and most perfect and healthy children, whose situation in life places them above continual drudgery, and below the refinements of fashion and delicacy.

We have distinguished the indispositions to which women are peculiarly liable, from the diseases to which they are also more particularly

particularly subject: the former are not only peculiar, but natural to the sex, such as their periodical discharges, and their breeding, bearing, and bringing forth children; the latter are numerous, but for the most part arise from one or other of those natural indispositions, and therefore require treatment and a method of cure,

adapted as well to the female constitution generally, as to the particular exigency which occurs. In the management of female patients, in all diseases, the sex will ever be the first consideration with a skilful physician; and his prescriptions will always pay due regard to this circumstance.

CHAP. II.

Of the Menses, or Periodical Discharges.

THE *menses* are monthly discharges of blood from the womb, which in warm climates appear at eight or nine years of age; but in this country from fourteen to twenty, and disappear at or about fifty. This discharge continues to flow with some women three, four, or five days, and with others not more than two; the quantity of blood discharged also differs, being smaller at it's first appearance, and increasing in the progress to maturity: in warm climates it is said to amount to twenty or twenty-four ounces; in these it seldom exceeds ten, and frequently not more than four or five. But the quantity depends also on the constitution and habit of body; those who are relaxed and lean, and who are full of blood, discharge more in this evacuation than such as are firm, fat, and of cold and phlegmatic habits: and the like difference will be occasioned by different modes of living; the luxurious and indolent always losing more blood than those who live poorly and labour hard. When these discharges occur early in life, their cessation is generally proportionable.

The immediate cause of these discharges is universally allowed to be an accumulation of blood, which, bursting the sides of the vessels, is discharged into the womb, and thence passes off; after the discharge, the

ruptured parts of the vessels meet and unite again, till they are again over charged by a fresh accumulation; and this happens monthly, because the female constitution being fitted for making regularly more chyle and blood than is required for it's own nourishment, or as a provision for the preservation of health; a periodical discharge of the superfluity becomes necessary, till a pregnancy occurs, and then the redundancy of blood which occasions the *menses* is appropriated to the growth and support of the foetus; which is evident from the appearance of these discharges when women become fit to bear children, and their cessation when they are past conception.

The natural passage of these discharges is by the womb; but in some instances this flux takes other courses, and is evacuated by periodical vomiting, or spitting of blood from the lungs, bleeding from the nose, or hæmorrhoidal veins, or the like; but when the blood flows by these preternatural passages, it is either productive of disorders, or occasioned by them.

As the approach of the periodical discharges is a very important crisis, and the constitution at this time undergoes a change, which, according to circumstances and management, may remove many disorders which have been afflictive before, or may be

be productive of others more dangerous and difficult to remove, it is therefore necessary that great care and attention should be paid to a matter so material to present and future health.

Many causes may concur to obstruct these necessary and critical discharges, or to render them irregular and uncertain; among others, a sedentary employment, or an indolent disposition, are the most prevailing; the girl who is destined to sit constantly at the needle or the loom, and she who from over indulgence or false and misplaced tenderness is confined to the bed-chamber and the drawing-room, fare exactly alike in the effect produced on the constitution: from want of motion and air the blood is not duly prepared, nor the redundancy directed to those passages where it may be discharged; the countenance changes; the patient grows dull, pale, and relaxed; her spirits sink with her strength, and nervous diseases, epilepsies, convulsions, or consumptions, are the fatal and unavoidable consequences. As this is the time of life when the constitution is in a great measure fixed, and the future health depends on proper precautions and due care at this interesting period, it is incumbent on mothers, and others to whom the conduct and management of female youth is intrusted, to give them proper intimations of the approaching change, and directions to avoid the dangers which may be incurred from ignorance or want of attention.

And as this critical period frequently arrives whilst girls of a higher class are at schools, and those in humbler life engaged in apprenticeships, such a remission of school business and labour should now be permitted, as would enable them to enjoy the benefits of exercise and air, and accomplishing the great purpose of procuring a regular approach of the periodical discharges, to lay the foundation of future health, in the constant and uninterrupted returns of them.

It has been usually conceived, that the

approach of the menses disposes girls to a desire after green fruit, and all sorts of trash; that such a wayward inclination frequently occurs at this time of life is certain, but it is more probably the cause than the consequence of obstructions; and producing wind, indigestion, and want of appetite, prevents that due preparation of the fluids on which the secretions depend; and that this is the case is the more probable, because these unnatural and absurd propensities are frequently to be met with among girls of indolent habits, or who are confined to sedentary lives or employments, but seldom happen to those of lively and active dispositions, or whose engagements in life expose them to labour, or afford them exercise.

In the upper circles, one of the principal preservatives against too inactive a life at this critical period is the amusement of dancing; we would therefore recommend all parents, who wish their daughters to provide against the dangers of obstructed discharges, and the train of consequent evils, to indulge them in this healthful and elegant exercise: the cheerfulness of public assemblies, and the sprightly dispositions which draw young people together on these festive occasions, give a spring to the spirits, and dispel vapours, hysterics, and that gloominess of temper, which frequently proves as detrimental to health as either of those disorders.

We have observed in another part of this work, that the custom of squeezing young girls into tight stays is destructive to health, and the occasion of a variety of disorders; but it is in no case more pernicious than in that of which we now treat: a fine shape cannot be obtained by force without injury to the constitution; bracing up the body impedes the circulation, obstructs the secretions, and necessarily prevents those discharges which can only be regular when Nature is at liberty to perform all her functions without difficulty or restraint.

Nor do we approve of promoting these

discharges; by forcing medicines, or of applying instantly to physick, when the approach of them appears to be delayed; in all such cases we recommend change of air, exercise, a light and wholesome diet, with variety of active amusements, as infinitely more efficacious than the best medical prescriptions in the removal of obstructions to these necessary evacuations: if a journey can be undertaken with convenience it scarce ever fails of success.

The symptoms which precede these evacuations, are a sense of weight, a heat and dull pains about the loins; pains in the head, back, and limbs; swelling of the breast, and blackness about the eyes, occasioned by the vessels being fuller of blood than usual; and these signs are accompanied with a certain degree of fever, and with a loss of appetite, and a change of countenance: when a due quantity of blood is excreted, nature is reduced somewhat below the standard of health, and the discharge leaves a certain degree of languor and dispiritedness.

On the immediate approach of these discharges proper care should be taken in regulating the diet, that the stomach may not be offended by food of a sour or indigestive quality, or by cold, unconcocted, or watery liquors; whatever disagrees with the stomach at other times will be more particularly obnoxious now, and should therefore be scrupulously avoided: great care should be taken to guard against colds, which are more easily caught in this situation than at any other time; and the discharge may, if necessary, be encouraged by sitting over warm water, and drinking warm diluting liquors.

The passions of the mind operate so strongly in obstructing the periodical evacuations, that we have known frequent instances of their being suddenly and totally stopped, from the effects of fright, anger, grief, and other violent impulses of the passions; the mind should therefore be kept as calm and undisturbed as possible during the continuance of this discharge.

By an attention to these rules the menses may in general be brought on with ease, and continued with regularity; if in particular cases these regulations fail, medicines adapted to the particular circumstances must be administered.

Obstructions of the menses are usually attended with a fulness of the vessels; lassitude, and disinclination to exercise; universal heaviness; paleness of countenance, pains in the back, loins, and limbs; discharges of blood from the nose; pains in the head, with an oppressive sense of weight over the eyes; a dislike of food, a low and quick pulse, the fluor albus or whites, hectic heats, flushes, coughs, hysteric, and fainting fits, tension or straitness of the womb, and distended veins.

If the obstruction arises from a defect of fluids, the following medicines will be adviseable.

Take tinctura sacra, (the sacred tincture) and oil of almonds, each six drams—of pennyroyal water, one ounce—of tincture of black hellebore, twenty drops. Make a draught, to be repeated thrice, or taken occasionally.

Or, take of Rufus's pills, one scruple—of salt of steel, three grains. Make a pill, to be taken, at going to rest, and repeated as occasion may require.

In full habits the last mentioned medicine should be omitted; but bathing the feet in warm water will in all cases be useful.

When the humours have been cold and sluggish, the following medicine hath been used with success.

Take the aromatic species, and the martial flowers, of each half a scruple. Make a powder, to be taken at bed-time in a spoonful of simple syrup.

Or the following have been recommended in different cases.

Take

Take of Rufus's pill, one scruple—the foetid pill, and gummous pill, of each half a dram—of calomel, ten grains. Make twenty pills, and give one at bed-time, repeating it occasionally.

Or, take compound powder of myrrh, one scruple—of castor powdered, four grains—of simple syrup, enough to make a bolus. To be taken every sixth hour, with the following draught.

Take of simple pennyroyal water, one ounce—of tincture of black hellebore, thirty drops—of syrup of saffron, one dram. Make a draught.

If the cause of obstruction is a defect in the quantity of good blood, and in cases of indigestion, or where there is a defect of vital heat, vomits of emetic tartar will be useful, and moderate doses of Rufus's pill, or the sacred tincture, with the addition of calomel in small quantities, may also be given.

Or the following.

Take of conserve of sea wormwood, one ounce—of prepared rust of iron, six drams—of Æthiop's mineral, half an ounce—of *canella alba* powdered, two drams—of castor powdered, one dram—of syrup of oranges, as much as will make the whole into an electuary; of which the quantity of a nutmeg is to be taken three times a day, with two table-spoonfuls of the following medicated wine.

Take filings of iron, Peruvian bark, and *canella alba*, of each two ounces—of rhubarb, sliced and bruised, half an ounce. Infuse the whole six days in three pints of old hock, and then strain or pour it off for use.

Or, take of tincture of iron in spirit of salt, twenty drops—of the decoction of Peruvian bark, two ounces—nutmeg water, and syrup of oranges, of each one dram. Make a draught, to be taken twice a day.

Or, take of salt of steel, or common green vitriol, burnt till it turns white, and reduced

to a fine powder, half an ounce—chrystale of tartar, fenna, jalap, and ginger, all powdered, of each half an ounce—of oil of cloves, six drops—of syrup of orange rinds, as much as will make the whole into a soft electuary; of which the size of a nutmeg may be taken twice a day, drinking after it a tea-cupful of sage tea, or of warm wine with ginger.

Where the habit is particularly full or bloated—

Take of the deobstruent pill, one dram—of the gummous pill, half a dram. Make eighteen pills, of which three may be taken night and morning, with three or four table-spoonfuls of the following julep.

Take of compound juniper water, one ounce and half—of simple pennyroyal water, four ounces—of syrup of saffron, two drams. Mix together.

Or, take of compound powder of myrrh, one scruple—of the martial flowers, six grains—of the extract of savine, four grains—of syrup of saffron, as much as will make a bolus. To be taken three times a day.

If the use of iron should affect the patient's breath, the following form of administering it is recommended.

Take of filings of iron, six drams—gum ammoniac, and Venetian soap, of each two drams—of the aromatic species, one dram—of aloes, half a dram. Make the whole with simple syrup into pills of a moderate size, and take three once or twice a day, according to circumstances.

Mustard-seed, to the quantity of half a table-spoonful, swallowed twice a day, has sometimes succeeded in promoting the menses, when other means have failed; and placing the feet in warm water, and at the same time applying ligatures or tight bandages about the thigh, has in some instances produced the same effect; electricity has also been tried with success.

When

When obstructions proceed from a viscid state of the blood, in full and gross habits bleeding may be necessary; and after the feet have been bathed in warm water, a cooling purge may be given, and repeated occasionally: in these cases a cooling and low diet is proper, and the patient's drink should be whey, toast and water, or small beer; she should take as much exercise as possible, and twice a day twenty drops of the tincture of black hellebore may be given in a tea-cupful of warm simple pennyroyal water.

When obstructions of this sort proceed from other disorders, they can only be removed by taking proper measures to remedy the particular indisposition of body, under which the patient labours, and to restore her health and strength; till this is done, forcing medicines will not only be useless but dangerous.

When the menses continue too long, or return too frequently, and the discharge is so great as to reduce the patient's strength during the intervals, it is said to be *immoderate*.

Women, whose habits are tender and relaxed, such as indulge in eating and drinking, or use improper, hard, indigestive, or highly seasoned food, and such as have frequently miscarried, are liable to suffer in this way; nor are more robust and vigorous constitutions exempt from this complaint, which may be brought on by hard labour, excessive exercise, or violent passions of the mind.

The chief causes are, a weakness of the vessels through which these discharges are made, and an acrimony and thinness of the blood; to which may be added those which we have mentioned above, and violently operating or improper medicines.

The approach of this hæmorrhage is usually denoted by a lassitude of the whole body, pains in the back and loins, a stretching or tightness of the stomach and sides, paleness of countenance, and a constriction

of the pores occasioned by a dryness and stiffness of the skin.

If the pulse is good, bleeding is advisable, and the earlier this operation is performed the more advantageous it will prove; but if the strength is greatly reduced, this evacuation must be omitted.

The first attention must be to keep the patient's body still, and her mind undisturbed; she should be laid with her head low in the bed, and be confined to cooling but nourishing diet, such as chicken or veal broth, panada, or sago with red wine; and her drink may be a decoction of the roots of nettles, or the greater comfrey.

If this treatment is not sufficient to check the discharge, (for it should by no means be stopped too suddenly) the following medicines may be administered.

Take of tincture of roses, two ounces—of nitre, fifteen grains—of liquid laudanum, ten drops. Make a draught, to be taken every six hours.

Or, take of alum whey, two ounces—of spirituous cinnamon water, two drams—of liquid laudanum, three drops—of simple syrup, one dram. Make a draught, to be taken every fourth hour, or as occasion may require.

Or, take of the decoction of Peruvian bark, one ounce and half—of the tincture of Peruvian bark, one dram—of liquid laudanum, two drops—of balsamic syrup, one ounce. Make a draught, to be taken as before.

A strengthening plaster hath been recommended to be applied to the spine of the back, and astringent fomentations are also prescribed; for this purpose use the decoction of the bark, with the addition of a small portion of brandy, or of red wine and vinegar.

The following prescriptions are also said to be efficacious.

Take two parts of alum, and one of Japan earth;

earth; powder them, and take a scruple of the mixture three times a day in a table-spoonful of any simple water.

Or, take the fresh rind of seven oranges; boil them in three pints of water till it is reduced to two. Strain it off, and add one ounce of white sugar, and forty drops of acid elixir of vitriol, and take five or six table-spoonfuls every three hours.

Or, take of the Peruvian bark in powder, half a dram—of the acid elixir of vitriol, ten drops. Mix in a glass of Port wine, and repeat it three or four times a day.

Two table-spoonfuls of the tincture of roses, with from five to ten drops of liquid laudanum, repeated three or four times a day, may produce very favourable effects.

The following bolus is also said to have been successful in violent floodings.

Take of alum, half a scruple—dragon's blood, and colcothar of vitriol, of each six grains—the aromatic species, and rhubarb in powder, of each four grains—of simple syrup, as much as will make a bolus; to be taken three times a day, with a small tea-cupful of the tincture of roses.

When the discharge is stopped, gentle exercise, a light nourishing diet, with a glass or two of good Port wine, and the use of mineral waters, may prevent a relapse.

When an immoderate discharge of the menses during pregnancy, or violent floodings after miscarriage, are accompanied or preceded by acute pains, apparently spasmodic, in the lower part of the back or belly, returning with additional violence after every discharge, opiates should be administered in clysters, which may be composed of a decoction of dried roses, with a dram of liquid laudanum.

The *cessation* of the menses, or periodical discharges, hath usually been considered as a crisis of considerable danger; females have been taught to look forward to it with

anxiety, and to apprehend that the future health and comfort of their lives depend on this period.

But those mistaken notions, which have not only imbibed the hours of many sensible and ingenious women, but have actually possessed the minds of some otherwise able and judicious physicians, seem now to be generally exploded; these groundless apprehensions are in a great measure removed, and a reasonable confidence substituted, that with very little assistance Nature is capable of providing for her own security in this circumstance.

These erroneous opinions were probably founded on a generally received idea, that the periodical discharge was an evacuation of peccant matter and morbid humours, so malignant and acrimonious, that the retention of it was always injurious, and sometimes dangerous, to the constitution; but this idea no longer prevails, and it is now generally, and ought to be universally known, that this discharge possesses no such pernicious properties, but is merely a redundancy of that pure and vital blood which animates the whole frame of a healthy woman; that it was created for obvious purposes, in which diseased and corrupted matter could not be employed; that it continues whilst these purposes can be fulfilled by it, and ceases when, according to the constitution of the human frame, it is no longer necessary; and that the retention of it is in general attended with no effects which are not as easily removed as any other disorders to which they may be liable.

The powers of Nature spontaneously bring about the cessation of this evacuation; the provision for it ceases when it is no longer to be of use; the extraordinary quantity of blood is not generated, the vessels provided for it's discharge close, and for the most part this process commences and is carried on without the least interruption in the health of the subject in whom this change happens, which generally takes place

about the age of forty-five, or from thence to fifty, earlier or later according to constitution and other circumstances, and the cessation of this discharge is sometimes sudden, but more frequently gradual, decreasing almost imperceptibly for months.

In some women, as we have already observed, the cessation of the periodical evacuation makes no material alteration; others, who have been accustomed to suffer indisposition during the times they were subject to these discharges, recover, after they have entirely ceased, such a degree of health and vigour, as they have not experienced during the continuance of them; but there are others who suffer such inconvenience from this alteration, as renders some assistance necessary.

About the time when this change takes place, many women find the disorders to which they have before been subject more urgent, frequent, and troublesome; some feel the well known symptoms of fulness of blood, such as flushes, heat, restlessness, want of sleep, or troublesome dreams, and unequal spirits; others are attacked with colic pains, and inflammations in the bowels and other parts; spasms, stiffness of the limbs, swelled ancles with pain and inflammation, and the piles and other usual effects of redundancy of blood: in these cases it appears that the organs which were instituted for the purpose of providing the natural surplus, continue to perform their offices, while the size of the vessels destined for its discharge is diminished, or they are entirely closed.

But in opposition to these cases, there may be others in which the organs formed to provide a surplus, are only capable of keeping up the necessary stock, which often happens in infebled habits; and on the disparity in the operations of these two different organs, most of the complaints incident to the sex at this particular period depend: in some the excretory or discharging vessels become unfit for these purposes,

whilst the organs of accumulation continue to act with effect; in others the provision ceases before any alteration is produced in the excretory vessels.

For the relief of those who are of full plethoric habits, and who have been accustomed to large evacuations, frequent bleedings in small quantities at a time, gentle laxatives, and great moderation in diet, are to be recommended; and they should be particularly attentive to these articles, at the times when the discharge should come on, according to the periodical return, when the patient is usually troubled with alternate flushes and sweats, succeeding each other almost instantaneously, and recurring many times in a day; she may also probably feel herself particularly indisposed after eating, in large assemblies, or other over-heated rooms, and her sleep may be restless, and interrupted with frightful dreams; and these symptoms generally vanish after they have remained as long as the discharge used to continue, returning again as the accustomed period of them recurs; and this course, after continuing sometimes a year or two, or even more, is apt, without proper assistance, to terminate in immediate and dangerous fluxes, or in apoplexies, palsies, and such other diseases as are occasioned by an extraordinary fulness of the vessels.

The loss of four, five, or six ounces of blood, at the distance of two, three, or four months, according to circumstances, and as the violence of the symptoms may require, will in general prevent every disagreeable consequence; and as the occasion for bleeding decreases with every performance of the operation, so the repetitions may by degrees be protracted to longer intervals, till it becomes no farther necessary.

Nor should this precaution be omitted on account of the patient's being subject to nervous complaints, or objecting to it from fear, or apprehension of ill effects: when the pulse is full and hard, and great heat occurs, with the symptoms which we have

have described, no danger will arise of increasing even nervous complaints by bleeding; on the contrary they proceed so evidently in this case from fulness, that they seldom fail to yield to moderate and repeated evacuations.

As swelled ancles are not unusual in these cases, bleeding is generally thought dangerous, from an idea that it would, at this time of life, inevitably bring on a dropsy: but if the parts appear to be hard, inflamed, and painful, which is most commonly the case, loss of blood in a moderate quantity, and gentle laxatives, will hardly fail to remove, instead of aggravating the disease; and the same remedies may be used with safety as often as this complaint recurs.

But an immoderate flux of the menses is a circumstance which also happens very frequently at this period, and which is in some instances owing to neglect of evacuations at proper times, in some to the use of improper medicines, and in others to the peculiar constitution of the patient; this appearance happens, for the most part, to women of sanguine habits, who live well, and who are accustomed to copious evacuations, or to the common effects of a fulness of the vessels, and calls for the utmost care, both with respect to present restraint and future regulation.

If the evacuations are not considerable in such constitutions, health is often interrupted, either by frequent inflammations of the tonsils or other glandular parts, or by rheumatism, erysipelas, or the piles; and if they cease suddenly, either the same complaints are aggravated, or the patient is exposed to repeated and excessive floodings; when the latter happens, it is much more prudent to attempt restraining the flux by rest, a very sparing and not over liquid diet, laxatives, anodynes, and cooling medicines, than by copious and repeated bleedings, or astringents of any kind.

Females of very irritable constitutions, who are not remarkably full, are yet some-

times subject to such immoderate discharges at this period; if, in such habits, the menses stop suddenly, the flow and force of the blood on the uterine system sometimes produce a violent flooding, which not only occasions present weakness, but increasing the irritability of those parts in particular, subjects the patient to very frequent and debilitating relapses.

When such cases occur, bleeding is by no means adviseable, as it would unquestionably add to the complaint; the cause must be removed, and the patient enabled to support the loss of blood, by rest of body and tranquillity of mind, by anodynes and such other medicines as allay irritation, and by a moderately cordial and light nutritive diet, with a reasonable quantity of sound generous wine.

The bark having been found safe and useful, where a regular intermitting fever has been attended with an immoderate flux of this kind, many persons have been induced to administer the same medicine in cases where these immoderate fluxes proceed from some irritating cause in the womb, or in the neighbouring parts, among which none is more common than that acrimony which produces or precedes a cancer in these parts, and which fluxes are attended with pains and heat, darting across the lower parts of the back and belly from hip to hip, and downward to the middle of the thighs; large clots of blood are frequently discharged with exquisite pain, and at the same time the flux is increased by the force of passing them.

In these cases good effects must not be expected from the bark; and it has been apprehended, that beginning scirrhus and other obstructions have been much aggravated by the injudicious administration of it, to restrain a discharge depending on causes not in the power of this valuable medicine to conquer.

Issues and setons are commonly recommended at this period, as capable of averting

ing all the evils which may proceed from the cessation of the menses; and where the patient has, in early life, been subject to cutaneous eruptions, sore and inflamed eyes, swellings in the glands, or other obvious marks of morbid or vitiated humours in the constitution, and all which may have disappeared about the time the periodical discharges first became regular; or where any present foulness on the skin, stinging pains of the cancerous or rheumatic kind, and hardness in the breast or other parts are evident; such drains may probably be of very considerable service: but when none of these circumstances attend, it seems absurd to constitute a great and lasting inconvenience for the purpose of curing diseases which do not exist.

In full and plethoric habits, a strict attention is necessary to diet; much animal food, and in particular flesh suppers, are to be avoided by those who are subject to immoderate discharges at the cessation of the periodical evacuations: a total abstinence from flesh for a few weeks at this time, would be of singular service, and not only stop these fluxes, and prevent the return of them, but likewise avert the numerous disorders which may be occasioned by plenitude of habit; such as apoplexies, palsies, fevers, and inflammation; nor is less regard due to the liquors, which should be cooling and diluting, and taken in small draughts.

In the interval of the usual periodical returns, moderate exercise is absolutely necessary; but as the times approach when these appearances might have been expected, the patient should avoid all violent motion, nor should she frequent public assemblies or other heated rooms.

It may be proper to mention a circumstance or two, which, as they occur sometimes, though not frequently, should be provided against.

Women who enjoy good health are sometimes seized with total suppressions of the

menses at times of life when such events are wholly unexpected, in some instances even whilst they are as young as thirty; and this stoppage may be occasioned by fever, sudden and violent colds, fright, anxiety, or grief, acting strongly during the flow of these discharges.

And notwithstanding this suppression, the patient may perceive little or no alteration in her health for a year or two, but may probably grow fat, and seem disposed to corpulency; by degrees, however, she finds unusual complaints, is more liable than common to colds, inflammations of the throat and tonsils, to eruptions of the erysipelatous kind, and to rheumatism; the bowels are, however, much more commonly affected with inflammation and bilious or spasmodic colic, one or other of which return, and often with violence, once in six weeks or two months, and sometimes at longer intervals, but in general at irregular periods; and, if the patient survives the more violent attacks, her constitution continues to be harassed in this manner, till the time when the menses ought to have ceased in the ordinary course.

To avoid the evil consequences of such a suppression, artificial evacuations should be substituted, instead of the natural one which is suppressed; and this should be done, if possible, before the appearance of the disorders to which the suppression may give rise: bleeding two or three times a year will be proper, with moderate purgatives frequently repeated, and a mild and rather abstemious diet. The season for preventing the difficulties occasioned by such a preternatural suppression, is at the first sensations of sickness, heat, restlessness, or pains beginning to affect the stomach, bowels, or other intestines, or of any of the symptoms which usually precede the disorders last mentioned.

Another circumstance frequently happens to women apparently healthy, but who are of sanguine habits, and disposed to

to corpulency, using little exercise, and eating and drinking plentifully: they perceive a sudden suppression of the menses, long before the expected time of their cessation, and soon after they grow full, the body seems to swell and stretch, and these symptoms are accompanied with pain and enlargement of the breasts, sickness in the mornings, dislike to, or inclination for, particular foods, and many other signs, so similar to those of pregnancy, as frequently to deceive married women, and not only induce them to believe themselves in this situation, but to fancy they actually discover the motions of the child.

The like circumstance also sometimes happens to single women about the age of forty, or as the time draws on when the periodical evacuations may be expected to cease; in these cases also the belly grows

large, the patient becomes unwieldy, the legs swell, and a variety of other complaints seem to indicate an approaching dropsy. On all these subjects the piles is a common attendant.

Though it may not be possible to ascertain with precision the causes from whence these preternatural appearances are derived, it is not however difficult to discover the proper treatment on such occasions: repeated bleedings, in small quantities, always afford relief; sulphur, magnesia, or other gentle laxatives, given constantly, prevent the piles, and keep the body moderately open; and regular exercise on horseback, or in a carriage, is always necessary to compleat the cure, which, however slow and tedious, is generally effected by these means, joined with quiet of mind, and a light and drying diet.

CH A P. III.

Of the Fluor Albus, or Whites.

THIS disease is a flux of thin matter from the *vagina*, or passage from the womb; it is sometimes of a pale greenish or yellow colour, but more commonly whitish; it is generally clear, but sometimes foul and foetid, and frequently sharp and corrosive.

Women who abound with fluids, and whose fibres are relaxed, girls at the approach of the menses, and women just arrived at full maturity, are most liable to this complaint, though it sometimes affects females from childhood to old age. It has been remarked, that women who are subject to a mucous defluxion at the nose, are, upon an obstruction or suppression of the menses, peculiarly liable to this disorder.

It may be occasioned by a cold moist air, a sedentary life, poor diet, or weak, warm, and watery liquors, taken in large quantities; it may also follow excessive periodical discharges, miscarriages, or mismanagement in childbirth.

The symptoms are various; the patient's face appears swelled and white, the parts below the eyes swell, and the eyes themselves are disordered, and appear as if she was dropsical; the colour of the skin is whitish, and the lower part of the belly hard; tumors appear in the legs, so soft as to retain the impression of the fingers; the patient is troubled with a biting pain in her stomach, and seems to feel an acid water in it when her stomach is empty, or she happens to vomit; her breath is af-

fects when she walks up a hill, her legs are cold, her knees feeble, and her womb is unusually opened, and falls down to it's mouth with a sense of weight; with some the discharge is daily, but in other cases it appears for two or three days, and then intermits for a week or longer.

In the more aggravated state of this disease, the symptoms are pain and sense of weight in the loins, foul urine, longings after some particular sorts of food, and loathings of others; indigestion, swelling of the face in the night, and of the feet and ancles by day; palpitation of the heart and faintings; and the termination of it is sometimes fatal in a dropfy or consumption.

When this disorder is moderate, it may be endured a considerable time without producing much inconvenience, but as it encreases, it spoils the beauty of the face, weakens the digestive powers, and produces a general bad habit: it occasions barrenness in some women, and in others a disposition to miscarry; and if this flux is imprudently checked, the belly swells, and a hectic fever, with a train of other disagreeable symptoms, follow.

To remove this disease the patient should use moderate exercise, but not to fatigue; her food should be nourishing and solid, but light and easily digested; her drink should be Pyrmont or Bristol water, and in some cases weak lime-water; but they should all be mixed with Port wine or claret: rich chicken broths and jellies are useful, and a milk diet will sometimes effect a cure; ifinglafs, dissolved in the milk, is peculiarly serviceable.

After an emetic of ipecacuanha, or of the antimonial wine, strengthening and aromatic medicines may be administered, according to the following prescriptions.

Take of the purest frankincense, one scruple—of the rind of Seville orange powdered, four grains—of balsamic syrup, enough to make a bolus. To be taken at going to rest, and in the morning, with the following draught.

Take of balsam of capivi dissolved with the mucilage of gum Arabic, half a dram—of barley-water, one ounce—of spirituous cinnamon water, three drams—of white sugar, one dram.

Or, take of compound powder of amber, two drams—rhubarb in powder, and frankincense, of each two scruples—balsamic syrup, enough to make the whole into forty pills; four of which may be taken at bed time, with four spoonfuls of the following julep.

Take of the chalk julep, six ounces—of troches of sulphur, one dram and half—of the stomach tincture, one ounce and half. Mix.

After these medicines, mercurials may be used as alteratives; and for this purpose the following form is recommended.

Take of quicksilver, one ounce—of Venice turpentine to fix the quicksilver, one dram—rhubarb and cochineal, of each two drams—of elixir proprietatis, a sufficient quantity to bring the whole to a proper consistence for pills. Make them of a reasonable size, and begin with one night and morning, increasing the number to such doses as the patient can take, without producing the smallest alteration in her sensible discharges.

When these pills have been taken some time, chalybeats will be proper, and last of all the bark.

Take of the simple bitter infusion, ten drams—of the aromatic tincture, one dram and half—of chalybeat wine, one dram. Make a draught, to be taken every day about noon.

Or, take of the aromatic species, six grains—of salt of steel, from one grain to two—of mithridate, half a scruple—of simple syrup, enough to make a bolus. To be taken night and morning.

Or, take of the extract of Peruvian bark, one scruple—of prepared steel, six grains—of the aromatic species, four grains—of syrup of saffron, as much as will make a bolus.

To

To be taken twice a day, in the forenoon and afternoon, at proper distances from the meals, drinking after each a glass of Spa, Pyrmont, or Bristol water.

But perhaps the most efficacious method of administering the bark is in substance; and the quantity of two scruples, taken twice a day in a glass of Port wine or claret, will be found of singular use.

In the warm seasons of the year, the cold bath is adviseable; if the weather is too cold to admit the use of it, a bath of warm water with aromatic herbs may be serviceable.

If any injections are used, those of warm water, with a small quantity of vinegar, are the most proper.

CHAP. IV.

Of Barrenness.

AS the sterility which prevents conception, arises much oftener from acquired than natural causes, proceeding commonly from ill-health, it may be properly classed among the diseases of women.

But the ill health which prevents procreation, is generally owing to irregularity, excess, or luxury; though barrenness sometimes proceeds from relaxation, from obstructions of the periodical discharges, or excessive evacuations in that way, and from grief, anxiety, despondency, or other passions of the mind, and is very frequently occasioned merely by indolence.

That high living, unseasonable hours, and indolence, are great enemies to the propagation of the species, will appear from a very slight enquiry into the families of a given number of rich and poor, taken indiscriminately: the former are frequently without children, or with one, two, or three, at the most; but enter the cottage of the latter, and you will in almost every instance be surrounded with a numerous, healthy, and hardy progeny; nay, this observation extends even to whole countries, whose females are more or less prolific, in proportion to the plainness of the food, and the labour required in procuring it.

In that state of relaxation to which indolence and luxury reduces the affluent, it is by no means extraordinary that the women should bear no children, or fewer in proportion than those whose solids are braced by wholesome food and constant exercise. Let the fashionable couple retire to a cottage, eat plain meats at proper hours, go to rest and rise early, walk and ride much in the air; let the lady restrain her passions, and keep her mind in tranquillity; and she will soon be rewarded for these restraints by the blessing of a numerous offspring, whose health, vigour, and perfect forms, will amply repay her for the sacrifices of high living and polite amusements.

If, however, the habit is so far reduced and relaxed, as to require restoration from medical assistance, astringent medicines, such as alum, dragon's blood, the chalybeats, and bark, with the Spa, Bristol, or Pyrmont waters, and the use of the cold bath, will be the most effectual remedies that can be applied; unless the patient has resolution enough to enter on a milk diet, and persist in it for a few weeks, in which time she will, in all probability, feel the happiest effects from it, in an unusual enjoyment of health, strength, and spirits.

When

When sterility is occasioned by grief, anxiety, or other passions of the mind, the cure lies not with the physician; the friends of the patient must endeavour to administer

comfort, the only remedy that can be offered; and the patient must call to her aid sense, reason, and religion.

CHAP. V.

Of Pregnancy.

THOUGH pregnancy is not to be considered as a disease, but a natural indisposition of the female body; yet as it is productive of a variety of complaints, and as these complaints, if not actually in some occasioned by improper conduct and management, are in most cases aggravated by it; we shall give some general directions to breeding women, and then point out the symptoms of this indisposition, and rules for proper treatment in each particular case.

Temperance and regularity are of great importance to women in this condition, and they should be cautious in their choice of food, eating only such as is light of digestion, and carefully avoiding whatever turns sour on the stomach, or disagrees with it; to these precautions should be added a free and mild air, and gentle exercise, which in the first months should be an object of great attention, as violent exertions, agitations, and fatigue of body, are injurious whilst the connection between the growing burden and the womb is slight and feeble.

The passions of the mind ought to be attended to with equal regard: man, the natural protector of the female sex, should at all times guard them with care, and treat them with tenderness; but at no time should these duties be performed with such exactness as in a state of pregnancy. He who is not devoid of all those principles, which can alone make him worthy the blessing of being beloved by the most amiable part of

the creation, will watch over the health of the drooping fair in this important crisis, will endeavour to anticipate all her wishes, and to indulge every inclination of her mind, which is not incompatible with her own safety, or beyond the reach of his attainment; he will soothe her mind with redoubled tenderness and affection, indulge even her fancies and caprices, nor interpose the slightest contradiction, without endeavouring to reconcile her mind to the disappointment by reason and argument.

Some regard is also due to the manner of dressing in this situation: tight stays are pernicious, acting destructively against the present health of the mother, the future safety of the child she bears, and are highly injurious to the nipples, which being depressed at this time, are frequently rendered unfit for the office to which they are destined.

It is essentially necessary to keep the body open during pregnancy, and this may in general be effected by a properly regulated diet and gentle exercise; should a costive habit however occur, slight laxatives will answer the purpose much better than stronger purges, and lenitive electuary, magnesia, or prunes stewed with senna leaves, may be taken occasionally: if these medicines should prove ineffectual, a tea-spoonful or two of castor oil may be given every three or four hours till stools are procured, or a pill or two of the following composition may be administered at going to rest.

Take

Take of finest succotrine aloes powdered, two drams—of castile soap, one dram—of simple syrup, enough to make these ingredients to a mass fit for pills, which should be of a moderate size.

When the more disagreeable and troublesome symptoms of pains, cramps, and swelled legs, attend the advance of pregnancy, and when the belly becomes ponderous and cumbersome, frequent rest should be taken in the day on a bed or sofa, and the woman should be enjoined to change her posture as often as she awakes in the night, to prevent the constant pressure of the womb on any particular part.

The ordinary symptoms of breeding in the earlier stages of pregnancy, are nausea, sickness at the stomach, and vomiting; heartburn, diarrhoea or looseness, depraved and unnatural inclinations for particular and unwholesome food, hardness, increased size, and pain of the breasts, faintings, and nervous or hysteric fits.

Most women are more or less subject to *nausea, sickness, and vomiting*, soon after conception. Sometimes these symptoms are felt in no considerable degree, and are of no long continuance; but in other cases they occasion such straining, as to produce violent head-aches and bleeding at the nose, and even in some instances bring on miscarriage: these complaints are also generally accompanied with weakness, or languor, depression of spirits, and broken sleep; which, with the causes, will frequently give way to air, exercise, and amusement. In young, and otherwise healthy women, of full and sanguine habits, the sickness is commonly more frequent and lasting, and attended with giddiness, and flushes or heats in the face and palms of the hands; and in this case bleeding is adviseable, with a diet rather low and laxative; but in delicate habits, and such as are disposed to nervous disorders, or where the woman is debilitated by nocturnal sweats, the frequency of

the vomitings or the loss of appetite, or exhibits other signs of general weakness, bleeding would be of the most pernicious consequence; and a much more generous regimen will be necessary with regard to diet, which should be light and nourishing, consisting chiefly of teas of animal flesh, chicken broths, jellies, roasted chickens, and other young fowls and animals, consulting as much as possible the patient's taste or present inclination, and adding a moderate quantity of good sound wine; if the weakness should be excessive, occasioning sweats upon using common exercise, and producing a wasting of the flesh, light infusions of the bark, or columbo root, may be given with advantage.

But if the loathings and vomitings become so urgent as to threaten danger, it may be prudent to administer a gentle emetic of ten or twelve grains of ipecacuanha, which may not only check the violence of these symptoms, but if they arise from indigestion, which is frequently the case, will strengthen the stomach, and correct that tendency; and these vomits may be repeated, at the distance of three or four days or a week, as occasion may require; nor are they at all unsafe, the strainings produced by medicinal emetics being always less injurious than those which are occasioned by natural sickness.

Many breeding women are constantly troubled with *heartburn* as soon as they become pregnant, and rely on this as a certain symptom of their being in that state: this complaint attends some women even till they are delivered; others it only accompanies through the first stages of pregnancy; and, in some instances, it does not occur till the motion of the child is perceivable. In either case little hope can be entertained of totally removing it by art, but by a due attention to the state of the stomach it may be rendered less troublesome. Whatever is found to offend or turn sour on the stomach must be avoid-

ed; and the disposition to ascendency may be corrected by chalk and water, or the chalk julep, by small quantities of weak lime water with an equal portion of milk; or by proper doses of magnesia; to which, for the purpose of strengthening the bowels, and keeping the body open, a few grains of rhubarb may be added occasionally. If this complaint occurs after every meal, it may be alleviated, for the present, by a glass of warm water, and a small table-spoonful of brandy taken ten minutes after it; and the digestion may be assisted by an infusion of the bark, made in the following way.

Take of the bark in powder, one ounce—of cinnamon, half a dram. Pour on these ingredients a quart of boiling water; let it stand till it is cold, then pour it off fine, and give a tea-cupful two or three times a day. If the stomach is particularly weak, a tea-spoonful of brandy, or of the spiritous tincture of the bark, may be added to each dose.

A *diarrhœa*, or *looseness*, is a symptom which frequently occurs, but is attended with very little danger; as it is in general produced by the disordered state of the stomach, it commonly gives way to the correction of those complaints: gentle emetics, small quantities of rhubarb, and a proper regard to diet, are in most cases effectual for the removal of this complaint; when it proves obstinate, small doses of opium may be given, but other astringents should be avoided, as a sudden check is rather more dangerous than the disorder itself.

The *depraved inclinations for improper or unwholesome food* of women in a state of pregnancy, though they have been often the subjects of ridicule, and are undoubtedly, in many instances, carried to such lengths of absurdity, as to appear rather the effects of caprice than real disorder, are certainly in some cases involuntary,

and may be accounted for by the weak state of the patient's stomach, and the general indisposition of the body, which affecting the mind, renders it wayward, whimsical, and fickle: the only remedy that can be applied to this indisposition is indulgence, which should be carried as far as it can possibly be extended without injury or extravagance.

The *increase of the size of the breasts*, and the straitness and pain occasioned by it, require no other attention than to observe the general directions we have given with respect to strictures and costiveness; if the patient is of a full habit, bleeding may relieve uneasy sensations of this kind, and if the breasts are remarkably hard and troublesome, a little sweet oil may be spread over them with a feather, after which they should be covered with flannel or fur; on this, and every occasion, rubbing ointments or oils on the breast should be avoided, the irritation occasioned by this process being attended with danger, and often producing inflammations instead of removing them.

The time of quickening generally proves troublesome, and especially to women of tender and delicate habits, who are about this time afflicted with *faintings*, or *nervous*, or *hysterical fits*; but they are seldom violent, or attended with fatal or dangerous effects. Medicines moderately cordial, rest, and mental quiet, are the best remedies for these symptoms, except they proceed from accidents, such as blows, bruises, or falls; in which cases such treatment must be applied as is adapted to the particular circumstances. Excessive passions of anger, or those of grief, vexation, or disappointment, often endanger the lives of both the mother and child; but the effects of those agitations may sometimes be prevented by small doses of opium judiciously administered.

If, in these early stages of pregnancy, any feverish symptoms should appear, such
as

as thirst, heat, weariness, an indisposition to motion, and a frequent inclination to sleep, it may be inferred that there is too great a fullness in the habit, which should be corrected by regimen and moderate evacuations; and for this purpose, the mild laxatives already prescribed should be given occasionally, and the patient should abstain, in a great measure, from animal food, and confine herself to a diet of vegetables and fruit, drink frequently of new whey, use exercise, and avoid close and confined rooms, and the croud and bustle of public assemblies and places of amusement.

From all or either of the foregoing complaints miscarriages may happen, if proper assistance is not interposed in time: those which follow, generally take place after the pregnant woman is sensible of the motion of her burden, and which arising from the weight, size, and pressure of the womb, may bring the life of the mother into danger.

The first of these is a difficulty or suppression of urine; this may be occasioned by costiveness, extraordinary fatigue, or standing a long time, either of which co-operating with the natural impediment of the additional weight on the kidneys and bladder, may at first prevent the water from flowing with its usual freedom, and this obstruction, together with the causes of it, increasing, may at last terminate in a temporary suppression; but this is seldom of long continuance, or attended with much danger, generally going off spontaneously, as the womb rises in the advancing pregnancy.

But if this difficulty or suppression of urine should be occasioned by an unnatural change in the posture and situation of the womb, constituting that disease which is denominated a *retroversion of the womb*, it is attended with extreme difficulty and danger, and calls for the immediate assistance of an able and experienced surgeon, or physician and midwife.

As the pregnancy advances, the *costiveness* also in some cases gains ground; to remove which, and to prevent the disagreeable consequences of gripes, pains in the stomach and head, piles, and miscarriage, the laxatives we have before recommended should be administered till they produce proper effects; and in the mean time clysters should be injected, composed at first of warm water and sweet oil, or Castile soap dissolved, and afterwards from two drams to half an ounce of common salt may be added by way of stimulative.

If the costiveness should occasion piles, the pain of them may be alleviated, and the symptoms by degrees removed, by the means we have already prescribed in treating of that disorder.

Some women, during the latter part of their pregnancy, are subject to *swellings of the legs and thighs*, and even of the lips of the pudenda, but these symptoms are rather disagreeable than dangerous, and occurring only in the day, abate as soon as the patient lies down in her bed, and go totally off towards the morning, and can only be alleviated till the removal of the burden by which they are occasioned; and this may be done by regimen, laxatives, and gentle friction of the parts affected, with a warm flannel-cloth or a flesh-brush.

Convulsions sometimes attend the latter stages of pregnancy, and are equally alarming and dangerous; instances having occurred where the patient hath expired in one of those fits, which are in general preceded by pains about the womb and stomach, and intense head-ache; and others, where the children have been forced to the birth in various stages of the pregnancy. As these disorders may arise merely from the pressure of the womb, they admit of no certain relief till the delivery; but proper care should be taken to alleviate the symptoms, by such treatment as hath been directed in other cases of convulsions.

Cramps, which may be considered as partial convulsions, may generally be relieved
by,

by external applications, such as æther, a volatile liniment, or gentle friction with a brush or the hand: change of posture is also serviceable in these cases; and when the complaint is violent, opiates may be added to the external remedies, and given internally in moderate quantities.

When the time of delivery approaches, *colic* pains are frequently so violent as to be mistaken for those of labour, and sometimes occasion unnecessary bustle and preparation; but these complaints are in general removed by a stool, which may be procured by taking a little rhubarb if necessary; and great regard should in this case be paid to the diet, that no part of the food be heavy or windy, or the liquors heating or inclining to produce acidities in the stomach: if these colic pains should be aggravated to any degree of continued violence, some danger always occurs of inflammations in the bowels, which at all

times dangerous, are still more so in a state of pregnancy, when the distension of all the parts renders them peculiarly liable to be affected in this way; and in these cases, bleeding, clysters, and opening medicines, must be relied on; spirituous liquors and heating cordials, too commonly given on such occasions, are of the most pernicious nature.

Many other complaints besides those we have mentioned may occur in the course of pregnancy; some actually occasioned by that state, and others which are aggravated by it, though they had existence before: but as we have already treated of most of those which may possibly be relieved without medical assistance, and as most of the others are either cases which are attended with much danger, or require manual help or some operation, we do not consider the notice of them as essential in this work.

CHAP. VI.

Of Miscarriage.

MISCARRIAGE, or *abortion*, is the exclusion or thrusting forth of the *ovum* or foetus before it is arrived to a state of perfection: if the child is born alive before the natural time, it is commonly called a *premature birth*; and if it happens within the first month, it is said to have been a *false conception*.

The size of the *ovum*, or child in embryo, generally increases in the following proportions: in six weeks after conception it arrives to the size of a pigeon's egg; at the end of eight weeks, it may reach to that of a hen; and in twelve weeks, it does not commonly exceed the bigness of a goose egg.

Miscarriages are more frequent between the second and third month than at any other period; they happen however commonly in the fourth and fifth, and till the pregnancy is so far advanced are seldom attended with any great degree of danger; though a repetition of abortions impairs the constitution, and lays the foundation of other diseases, which may owe their existence, and the fatal consequences which attend them, to this cause.

Many disorders are also consequent to frequent miscarriages; such as the fluor albus or whites, the returns of violent floodings, nervous and hysteric complaints, and all the train of symptoms which are the

the usual companions of general weakness.

The causes of miscarriage may be diseases, weakness, or relaxation of the mother; diseases of the navel-string, such as knots or doublings in it, or it's being twisted round the child's body, and by pressure preventing the circulation of the blood through the vessels; diseases of the foetus itself, or accidents received by it or by the mother, and communicated to it: miscarriage may also be occasioned by too copious evacuations; by violent exertions of strength, in lifting weights or hard labour; by excessive exercise of walking or riding; by straining the body in over-reaching it; by sudden shocks in jumping, leaping, or falling; by blows, bruises, and other external injuries; by straining in vomiting, coughing, or going to stool; by other diseases, such as fevers, convulsions, epilepsies, or small-pox; by over-fulness of blood, luxurious living, and inactivity of life; by surfeits, occasioned by eating, or produced by foetid and disagreeable effluvia; by the excesses of the passions of the mind in anger, grief, joy, or vexation; and by frights and sudden impulses of fear.

The symptoms of approaching abortion, are pains in the back, loins, and belly; a dull, heavy sensation of pain in the thighs, and particularly in the insides of them; sickness or nausea at the stomach, and palpitatio of the heart; bearing down pains like those of child-birth, with regular intermissions, and accompanied with alternate shiverings and heat; the evacuation of water, or blood and watery humour, from the womb; the subsiding of the belly, softness and flatness of the breasts; and, in advanced pregnancies, the cessation of motion, and other signs exciting suspicions of the death of the child.

Miscarriages might frequently be prevented by the exercise of common prudence, and the use of such precautions, as different habits and constitutions may re-

quire, and reason will in most cases suggest.

Weak and watery liquors, taken in considerable quantities, encourage nervous disorders, and are therefore prejudicial: we cannot suppose that any opinion we could offer would induce the female sex to forego the pleasures of drinking tea, but we cannot help exhorting them to be moderate in the use of it, and by no means to pour it down their throats scalding hot, or to take it at unseasonable hours.

Moderate exercise, taken constantly, with the benefit of fresh air, is of great importance, bracing up the solids, and enabling the frame to sustain the increasing weight; nor is proper rest of less consequence: the breeding woman should be at least nine hours in her bed, but her rest should be taken at night, not at noon, and for this purpose she should go to bed and rise early; the air of the morning is much more beneficial than that of mid-day.

The diet should be adapted to the habit: those who are full of blood and juices should be sparing, and avoid wine, spirits, spices, and every thing of a heating quality, or which tends to add to the fluids, and the diet should be opening, cooling, and consist more of vegetables than flesh; those who are of thin, delicate, and tender frames, and whose habits are less robust, should feed and drink more generously, avoiding, however, meats hard of digestion, and particularly such as are salted or dried.

If, from circumstances against which human foresight cannot guard, symptoms threatening a miscarriage should appear, the woman should be confined to her bed, or rather laid on a mattrafs, with her head lower than her body, and she should be kept in that situation till the alarming symptoms are removed; her body should be kept open, and her mind should be soothed into calmness and tranquillity; her food should consist of rich and nourishing broths and jellies, sago or panada with

Port wine, rice milk or oatmeal gruels boiled to thickness; and every thing should be taken either cold, or as nearly so as the season will permit, and in very small quantities at a time: her drinks may be whey, barley water, or herb teas, with lemon-juice and sugar; and she may take a small quantity of nitre, from a scruple to half a dram, every six hours, in a tea-cupful of her common drink. A decoction of calcined hartshorn prepared, may be useful in case of a looseness; and a disposition to vomit may be checked by giving now and then a spoonful of a saline mixture; and a gentle opiate may be taken the last thing at night; yet though these medicines are frequently useful in such cases, we would recommend their being administered sparingly and with caution.

In most cases some blood should be taken away, and especially if the patient is hot, fluttered, in much pain, and generally feverish; the quantity must be determined by habit, constitution, and other circumstances.

If, notwithstanding these precautions, the flooding should come on, and a miscarriage appear to be inevitable, every lump or clot that is passed off should be put into a basin of water, and examined, as it is of importance to the future treatment, to discover when the foetus hath been excluded.

The dilatation of the orifice of the womb, to admit the passage of the abortion, is very often slow and painful in the early stages of pregnancy; the frequent repetition of clysters, slightly stimulating, is sometimes of great use in such cases, to promote the expulsion of the foetus, the throes to effect the discharge of which increase the flooding, and bring on very disagreeable symptoms.

If the placenta, or after-birth, should remain after the foetus hath been brought off, it will sometimes come away in pieces, at the distance of a week, or even ten days, after miscarriage, attended with a very putrid and offensive discharge: in this case great care should be taken to keep the parts perfectly clean, by frequent injections of warm milk and water, or of an infusion of the bark, with a small quantity of tincture of myrrh; and by this means inflammations of the womb, or even mortifications, which are nor not unfrequently the consequences of this circumstance, may probably be happily prevented.

Ingenuous writers on these subjects have given a caution, which ought by no means to be disregarded. It sometimes happens, in cases of double or triple conceptions, that the growth and progress of one may be interrupted by another, and may in consequence of this interruption perish, and be afterwards expelled by miscarriage, the remaining conception being uninjured and capable of arriving to perfection: on this account attention should be paid to the situation and appearance of the woman after every miscarriage, in order to observe whether a real pregnancy still exists; which will be discoverable in the earlier periods, by the breasts continuing plump and full, and in more advanced pregnancy, by the increase of size and weight, and the sense of the child's motion.

After a miscarriage proper means should be taken for the recovery of the patient's health and strength; such as change of air, gentle exercise, and the use of the bark and mineral waters.

CHAPTER VII.

Of Floodings.

AS *floodings* frequently happen during pregnancy, which yet do not terminate in abortion, it may be proper to mention the general causes of these appearances, the circumstances with which they are attended, and the method of management in such cases.

And this flooding is not to be understood to mean the accustomed periodical discharge of women, which ceases soon after conception; but an evacuation of blood from the womb, happening at unfixed and uncertain periods.

The immediate cause of this discharge, is either the separation of some part of the surface of the ovum or foetus from the womb in the first stages of pregnancy, or of some portion of the placenta in the more advanced state: and these separations may be occasioned by external accidents, such as strains, blows, bruises, or falls; or by over-fullness of blood, high living, fevers, violent passions of the mind, or excessive exertions of the body; and by whatever is heating or quickens the circulation of the blood.

It may also arise from particular diseases, affecting either the womb, the placenta, or the foetus itself; from irritation, communicated to the womb from other parts of the body; from agitation of the body in coughing or vomiting; or from such disorders as, affecting the bladder or other intestinal parts, occasion difficulty and straining in making water.

No extraordinary degree of danger to the mother attends these floodings during the first five months of pregnancy, though miscarriage is sometimes unavoidably the consequence; but after that period the increased size of the womb and blood-vessels

may occasion so very great a loss of blood, as to bring both the mother and the child she bears into a situation the more hazardous, because it is difficult to give it such a check as may prevent its return, which is very apt to happen on the least agitation of the body or perturbation of mind.

The quantity of the discharge, the degree of pain with which it is accompanied, and the appearance of the blood, will in a great measure determine the danger of miscarriage; if the former are moderate, and the latter of a lively red colour, unmixed with lumps or clots, or with substance of a fleshy consistence, or a watery fluid, hopes may yet be entertained that the evacuation may be rendered less violent, and the returns less frequent, and that the mother may be enabled to preserve her child: if none of these favourable signs occur, a miscarriage will hardly be prevented.

To lessen this discharge, it will be necessary to stop in some measure the impetuous circulation of the blood, or to keep the body in a certain position, which may encourage the coagulation of the blood into such clots as may fill the mouths of the vessels, and stop the current of blood.

To effect these purposes, a small quantity of blood may be taken from the arms, and the patient should immediately be ordered to her bed, which should on such an occasion consist of a mattress, stuffed with hair instead of down or feathers; she should sleep alone, under a light covering; as much air as possible ought to be admitted to her, and the utmost care should be taken that her mind is not disturbed by fear, fright, or anxiety, or agitated by anger, disappointment, or vexation: the diet should

be.

be light and cooling, taken in small quantities at a time, and quite cold.

Whether the relief afforded by opiates arises from any particular styptic power residing in these medicines, or whether it is produced by their general operation, as anodynes, in allaying the ferment and nervous irritation, certain it is, that they are of particular use in these cases, and under proper caution may be given with considerable advantage, where the habit is not remarkably full, or the fever high; when either of those circumstances occurs, or where the patient is costive, opiates are improper till the vessels and bowels are emptied by proper evacuations; the former must be done by bleeding in the arm, and the latter by emollient clysters of the most simple and innocent composition, and ad-

ministered in a very moderate state of warmth.

But if the flooding is so excessive, as not only to endanger abortion, but even the death of the unfortunate mother, napkins, folded many times double, and dipped in vinegar and water, may be applied to the loins and the very lower extremity of the back-bone, and as often as they grow warm fresh ones should be immediately applied.

The last effort that can be made, when all attempts to check the discharge of blood prove abortive, is to procure as speedy an exclusion of the foetus, or birth of the child, according to the state of the pregnancy, as possible; but as this can only be performed by proper assistance, we shall avoid giving any directions on this head.

CHAP. VIII.

Of Child-birth.

IT is by no means our purpose to give instructions for the delivery of pregnant women, or to advance a single word on a subject, which is almost generally in the hands of men of learning, judgment, and humanity, equally capable of rescuing their patients from many of the perils of child-birth, to which the sex have been too long exposed, and of preserving the infant from mental and corporeal infirmities, which were too often the consequences of their being victims to ignorance and inhumanity in the moment when they were to be ushered into existence, and when the health, comfort, and happiness of their future lives, depended on the conduct of those who, from mistaken principles of delicacy and decorum, were permitted to undertake an office for which they were neither qualified by knowledge, education, or study.

Not that we would be understood to insinuate, that all female midwives are alike incapable or inattentive; many of those too have improved their knowledge by experience, and being equal to the task they undertake in all common cases, possess candour and integrity enough to call for assistance whenever any difficulty occurs.

Yet we apprehend there are others not altogether so well informed or well disposed, and to these we beg leave to offer a few hints, which may be of use to them in their practice, and which, being duly regarded, may tend to encrease it, and add to their stock of reputation.

The first caution which occurs, is that of perfect sobriety, and we trust our female readers of this profession will pardon a suggestion, which seems to imply some charge of failure in this most essential point: we are well

well aware, that indiscretions of this sort are far from being general, but the consequence of one such instance must be too fatal not to merit our preventive notice.

Patience is another virtue of great importance in the exercise of this profession: Nature herself, if her operations are attended to, will in all common cases expel the child with very little assistance; the less is given the better in most instances, at least it should never be offered till the natural advances demand it; attempts to forward or hasten labours are always imprudent, generally useless, and at most times dangerous.

The last piece of advice which we shall offer to female practitioners, is to divest themselves of vanity upon these occasions; if they are puzzled, or entertain doubts, always to give way to this diffidence, and with a degree of ingenuousness, which will ever insure them respect and regard, to confess the difficulty, and require the assistance of a surgeon or physician. To assumed knowledge and false consequence in this particular many a valuable life has been sacrificed, and many husbands and families have been left to deplore misfortunes, which might have been avoided by an open and disinterested conduct.

In addressing those women who make the attendance on females in this situation their only or principal employment we shall use less reserve: we know some, even among this class, whose sobriety, honesty, obedience to directions, and tenderness, would do honour to higher ranks in life; but we are sorry to say, that these virtues cannot with justice be ascribed to the generality of those who are engaged in this way of getting a livelihood; to consummate ignorance they are too apt to add an obstinate opinion of their own self-sufficiency, and to a sordid regard to their own interests is joined that kind of hardened inhumanity, which leaving them strangers to the emotions of pity or com-

passion, induces them to pay less attention to those they undertake to nurse than to themselves, and occasion neglect and every species of mismanagement.

Happy should we think ourselves, if to this list of failings we were not obliged to add, in many instances, want of sobriety; a fault in these particular cases of so destructive a nature, that no severity can be equal to the due punishment of it.

In favour of a sober, vigilant, and tender nurse, too much cannot be said; and so highly important do we consider this office, that we earnestly wish some method could be adopted, by which the characters, as well as the capacities of those who engage in it, might undergo a public examination; and that some suitable provision might be made for those who, in the faithful discharge of the trust, have passed through a life of fatigue and labour, and have acquired the infirmities of old age, before they have been enabled to lay up a competency for their support; and who having spent the noon of life in virtuous industry, are condemned to pine through the evening of it in poverty and wretchedness.

Having thus discharged our duty, in reminding midwives and nurses of theirs, we shall proceed in this chapter to lay down such rules for the treatment and management of women after delivery, as may be of general use to all classes of people, who are either interested in the safety and welfare of those who are in this critical situation, or are engaged in giving them attendance; and by a due attention to which, many of those evils may be prevented or averted, which we shall have occasion to describe in some subsequent chapters.

It may however be necessary to caution nurses against attempting to support the strength and spirits of the woman, during actual labour, by spirits, cordials, and wines, which tend only to add to the fever, inflame the womb, and increase the diffi-

culty of delivery, and to occasion future dangerous, and very often fatal consequences, in fevers of various kinds, or violent and excessive floodings.

That no very extraordinary degree of skill is required in treating women after delivery, in such a way as to prevent most of the disorders incident to this condition, is evident from the number of women who, without any care or management at all, escape the dangers of child-bearing, and go through the perils of labour without hazard or inconvenience.

But prudence and caution are not to be neglected, because those who are devoid of both are sometimes preserved; nor are we to think the exercise of them at all less necessary, from the frequent instances which occur of successful folly. When the fatal blow is struck, it will be too late to repent of our temerity; nor shall we derive consolation from the reflection, that we apprehended our friend might have fared as well as other women in the same state.

And indeed the suggestions of common sense, with a very few plain rules, and a watchful attention to the operations of Nature, whose dictates will be the best guide on this occasion, will be in general sufficient to conduct the lying-in patient in safety through the various changes of this critical period, and to avert the diseases to which women in this situation are peculiarly liable.

But as these diseases, under neglect and improper treatment, are more apt to be fatal than most others, we must recommend to the midwife of either sex, an early attention to the approach of every complaint, and a speedy application of preventive remedies: disorders are much more easily prevented than removed, and if the first signs of threatening illness are duly regarded, the most dreadful and dangerous symptoms may in most cases be obviated.

After the child is born, and the after-birth extracted, the first attention is due to

the woman, as the infant may remain without injury till the safety of the mother is provided for; who should be suffered to rest a little, and a still longer time if there are any appearances of flooding or fainting, a dry and warm cloth being in the mean time applied to the body.

As soon as she can be moved with safety and convenience, all the wet cloths about her should be carefully and cautiously taken off, and she should be supplied with others, properly dried and warmed; and a napkin, or other cloth of sufficient size, folded several times double, may be laid over the belly, and secured by being fastened to the band of the shirt or petticoat which furrounds the waist: if the weather is cold, or the woman has been accustomed to warm cloathing, her belly and stomach may be covered with flannels; if she has sweated much in her labour her head-dress will also require to be changed, and every thing possible should be done to render her comfortable.

In case of faintings, spiced and hot wines and caudles are extremely improper, and still more so are spirituous liquors; if somewhat is necessary to be given, it should be either simple cinnamon water, or a bit of bread dipped in wine, but whatever is taken should be cold: if wine is apt to disagree with the patient, a small quantity of spirits, diluted with water, may be substituted.

After the woman has lain quiet a proper time, and recovered in some degree from the fatigue of her delivery, a small basin of gruel or panada may be given her, with wine in it; when the labour has been long and severe, a little warm negus is allowable.

The diet must in general be regulated by the woman's usual manner of living at other times, and by the discharges after child-birth: if these are copious, and the mother suckles her child, greater liberties may be given in this respect than when the milk is to be repelled, and when these discharges

discharges are insufficient in quantity to answer the purposes for which they are intended: water-gruel, panada, sago, and spoon-meat of the like kinds, are generally directed for the first two or three days; after which chicken broth, veal broth, or beef tea, and, in succession, chicken, partridge, young rabbit, light puddings, and such easily digested food, may be permitted. Some women have a particular dislike to those spoon-meats which are usually termed sops; and such, as well as those who have been accustomed to live high, must be indulged with the animal broths and flesh from the beginning.

The drinks should be barley or oatmeal water, water with a toast, or whey; and some recommend in the summer, lemonade or other acid juices of fruits, with water and sugar, and advise these liquors to be taken quite cold, though they admit of their being warmed in winter. If the mother abandons her child to be nourished by the milk of a stranger, which scarce any thing but actual inability will justify, she should be sparing in the use of liquids, and eat freely of the ripe fruits of the season.

But when the mother proposes to discharge her duty to her offspring, and to execute herself the most important and pleasing office of a mother, the child should be put to the breast as soon as the appearance of milk and the strength of the woman will admit, which is in general about twelve hours after the birth; and this practice answers the various purposes of cleansing the child from the meconium, or accumulation of fœces in the bowels, encouraging the flow of milk, and preventing the bad effects which the detention of too great a quantity of that fluid in the breast will in most cases occasion, and in particular those painful swellings and inflammations of the breasts arising from obstructions, or from the irritation of them by efforts of violence to draw the milk. The child, however, should not be put to the breast too

often, nor suffered to remain there long enough at a time to fatigue the mother; who should be raised in her bed, and supported with pillows, in a proper posture of ease and convenience, whenever the child is permitted to suck.

A variety of methods have been prescribed for the discussion or dispersion of the milk; but unless some particular complaint occurs, few other precautions are necessary than to keep the breasts warm and dry: if, however, they should be very much distended, and grow hard and painful, a little sweet oil warmed, and laid over the breasts with a feather, will in almost every case remove these inconveniencies; but either rubbing in any unctuous matter, or endeavours to extract the milk forcibly, are prejudicial; in most instances the disagreeable sensations which arise from checking the milk, are but of short duration, terminating most commonly, in the course of twenty-four or forty-eight hours, either in a profuse sweat, attended with a sour smell like that which accompanies perspiration in the gout, in a discharge from the bowels, or the spontaneous evacuation of the milk from the nipples.

Women in child-bed are as subject to costiveness as during pregnancy, and the same medicines may be administered to keep the body open, such as a laxative pill, lenitive electuary, or magnesia: if the habit is peculiarly obstinate, emollient clysters will be necessary, for the bowels ought at any rate to be kept easy; and when the milk is repelled, it will be requisite to procure two or three stools a day for some time.

The absurd idea that clean linen would be pernicious to women in this condition is in a great measure exploded, nor is it easy to conceive how such prejudices could ever prevail, or that any person of common understanding could believe it more salutary to the unfortunate patient to be confined to dirt, filth, and the fœtid effluvia
of

of her cleansing discharges, than to give her clean and dry linen, and regale her with smells agreeable to her senses: it is not only proper to remove the cloaths she had about her at the time of delivery as soon as possible, but to change her linen frequently afterwards; even once every day will not be at all too often, if the after discharges are copious, or the woman is subject to sweats.

Another old custom of equal absurdity has now also happily given way to the unfettered exercise of reason; instead of keeping the woman in bed nine days, which used to be done with religious and scrupulous exactness, it is now the universal practice to let her be taken up to have her bed made the third day after delivery, if no extraordinary degree of weakness or other disagreeable symptoms appear: the evening is the time commonly preferred for the first taking the lying-in patient out of bed, because, as the hour of sleep is at hand, she may have a speedier opportunity of recovering from the fatigue of rising; but if she is particularly weak, or is apt to be much affected with being taken up, the morning may be a better time, as she will be then less exhausted than towards night; but whatever hour is thought most adviseable, she should only remain out of bed the first time long enough for it to be put in order, and continue to prolong the time of setting up gradually day by day.

The chamber in which the woman lies in should be as large and airy as possible, nor should she be excluded the benefit of fresh air, which may after forty-eight hours be admitted from a window or door, under proper precautions that the current of it does not fall on the patient; nor should the curtains be wholly closed, or the bed loaded with an unusual quantity of cloaths: though a gentle perspiration is serviceable, and ought not to be discouraged, yet care should be taken that it does not increase to a sweat, which is always injurious, weak-

ening the patient, and frequently bringing on eruptive complaints of a very disagreeable nature; even where the disposition to sweat is natural or habitual, it should be checked as far as is consistent with safety and prudence, and the linen both of the bed and body should be frequently changed, as it is exceedingly pernicious when it is saturated with sweat.

The heat of the room must be regulated by the season of the year, and the warmth of the weather; in summer there should be no fire in the room, nor should the chimney be stopped; in the winter, a moderate and equal heat should be kept up, but even in cold weather the air should be often changed, by opening a window or the door for a few minutes.

Quiet of body and mind are essentially necessary to the safety and speedy recovery of lying-in women. The custom of crouding the room with gossips during the labour is absurd, and often productive of ill consequences; but it is still more prejudicial after delivery, when the patient should remain as undisturbed as possible, nor should her rest be interrupted, even for the purposes of giving her refreshment, which though often required, are yet less necessary than repose: it may perhaps be much more prudent to permit the nurse to sleep on a chair, or on a sofa, in the same room, than by compelling her to be constantly awake, to prompt her to such an officious attention to the woman committed to her care, as may induce her to rob her of her best cordial, sleep, to administer such to her as are probably unnecessary, and sometimes hurtful.

Nor must we omit to caution nurses against the pernicious custom of giving caudle with wine or spirits, or either of those liquors alone or mixed, at any hour of the night when the woman in child-bed happens to awake; diluting liquors only should be at any time given between the meals, but any thing of a heating quality taken in those hours which should be ded-

cated, to repose, serves only to increase the patient's restlessness, and add to the fever which occasions it.

But unless the mind is kept at ease, all other regulations and prescriptions will be of little use; if the passions are disturbed or agitated, the body will suffer in a greater proportion. Care should be taken to conceal from the lying-in woman any thing disagreeable which may occur, either concerning herself, her family, or friends; nor should less caution be used in avoiding to thwart her inclinations or contradict her opinions; the mind is at this time in so irritable a state, that perturbations of any kind are dangerous, and may bring on restlessness, fevers, convulsions, frenzy, or even death itself.

The infatuation of permitting the lying-in woman to receive visits from all her particular acquaintance, within a day or two after her delivery, is often productive of the most fatal consequences; so prejudicial is noise of any kind, that it cannot be too carefully guarded against: knockers and bells are with great propriety muffled, and straw laid in the streets, to prevent the rattling of carriages from being offensive; yet the worst disturbance of all is too often unheeded, and crowds of tittle-tattle friends are admitted, who not only harass the patient with their conversation, but add to the injury, by compelling her to join in it; every man who regards the safety of his wife should shut his doors against such unnecessary intruders, and whilst even the light is excluded, lest it should be too powerful for the woman's spirits, care should be taken to prevent her from being obliged to endure a fatigue to which even health itself is hardly equal.

Nor is fatigue the only effect of these intrusions; at such visits the tale of the day circulates, and if any unfortunate woman in the neighbourhood, in the like condition,

has been talked or worried into a fever, which has terminated in death, the story of a person dying in child-bed is dressed out with all the aggravating circumstances of horror, ascribed to any cause but the right, and served up to the unhappy object of the present visit, who is no sooner left alone, that she discovers symptoms of indisposition in herself, and not uncommonly becomes a martyr to the fears induced by such incautious communications: that such knells are more frequently injurious than those which are rung from the parish steeple, might easily be proved; though these last mentioned relicks of superstition might be omitted without prejudice to the cause of religion, and with singular advantage to those who are indisposed in health, or oppressed in spirits.

Some recommend opiates after a very hard or painful labour, and prescribe from half a grain to a grain of opium in a pill, or from twenty-five to thirty-five drops of liquid laudanum in a spoonful of cinnamon-water, or of the common drink, to be taken the first night after delivery, and repeated for three or four succeeding ones, to prevent restlessness or after-pains; but we apprehend neither these or any other medicines will be necessary, if the patient is treated as we direct, and kept in a state of quiet and tranquillity of mind; however, in cases where such help is actually required, and opiates disagree, occasioning sickness, pain, or giddiness of the head, from twenty to thirty grains of newly powdered Russian castor may be substituted with advantage: perhaps a draught of mild ale or porter may be as conducive to rest as either of these medicines, where the patient is used to malt liquors, and suckles her child; but this is an indulgence that must not take place till the fourth or fifth day, when the redness of the discharge begins to abate, and all danger of a milk-fever is at an end.

C H A P. IX.

Of the Diseases incident to Child-birth.

IT is somewhat extraordinary, that, considering the critical situation of women at this most important crisis, they should in general be left so much to chance; and that less caution and prudence should be exercised in averting evils which are so frequently productive of the most fatal consequences, than in avoiding the common and much less consequential hazards of colds, fevers, or slight infections: surely the safety of a mother must be worth the utmost degree of attention that can be bestowed on it, whose existence is equally interesting to her family, and beneficial to the state.

Nor are the diseases usually attendant on this state to be attributed to neglect only; ignorance has a considerable share in the mischief, and obstinacy compleats the destructive system: of all the situations of bodily danger, scarce any can equal that of a woman in child-bed, in the hands of neglectful and careless friends, an ignorant midwife, and an obstinate nurse.

It ought in every case to be the business of the lying-in woman's friends to call upon the midwife for frequent attendance during the first week or ten days after her delivery; within this space of time most of the diseases incident to that state appear, and if they are attended to on the first symptoms, and in the early stages, they are for the most part more troublesome than dangerous, and will in general yield to some alteration in regimen, with little or no assistance from medicine; but if they are permitted to gain ground, the most fatal consequences may always be dreaded: nor will it appear at all extraordinary, if we consider the situation of the patient, whose strength has been worn down by the fatigue of a pregnancy,

and exhausted by the pains of a recent labour.

These dangers might also be often avoided, if nurses would be less bigotted to their own opinions, and less inclined to practice certain experiments, which having been sanctioned by the authority of ancient usage, have been handed down from nurse to nurse in succeeding generations, and without any other pretence for their being retained, are brought forward on every occasion, to the risque of health in most cases, and the hazard of life in many.

They should be strictly enjoined to obey implicitly the directions of the learned or experienced midwife, never to obtrude a judgment of their own; or, what is too common, to deviate from these instructions, and at the same time assert that they have conformed to them, practising two-fold deceit, and inducing the physician or midwife to give up, as unsuccessful, an untried prescription, and perhaps offer another much less efficacious than the former.

It is the duty of a nurse to watch attentively every change in the person she attends, to mark the approach of any disagreeable symptom; and, instead of attempting to remove it by any endeavours of her own, to give immediate notice to the friends of the patient, that proper advice may be had in those precious moments, when the progress of disease may yet be stopped, and the impending dangers averted.

Nor must we neglect to caution the lying-in woman against deceiving herself, by suppressing disagreeable symptoms as they occur, and by avoiding to complain, purchasing present indulgencies at the price of certain danger and probable destruction.

We

We trust caution against vanity in these serious moments must be unnecessary; though we cannot help acknowledging, that we have sometimes observed, with great concern, sacrifices made of safety and recovery to dress and appearance.

The diseases to which women are peculiarly liable after child-birth, are *faintings, excessive floodings, after-pains, inflammations of the womb and breast, irregularities in the lochea or cleansing discharges, sore nipples, and fevers* of several different kinds.

Slight degrees of *fainting* are neither of long continuance or attended with any considerable danger: this symptom sometimes appears after common and mild labours, and may be accounted for by the sudden removal of an extraordinary weight and pressure, from the instantaneous evacuation of a large quantity of blood, and from the immediate departure of that intense and agonizing pain, which held nature upon the rack, and so compleatly exhausted the strength, that the suspension of the torture, and of the faculties which endure it, naturally took place together.

In these faintings no danger is to be apprehended whilst the breath continues distinct and the pulse regular; whilst neither the extremities or the body are particularly cold; when there is no extraordinary oppression or palpitation, and no suspicion is entertained that the womb has been injured, either in delivering the child from it, or extracting the after-birth.

In most of these cases, unaccompanied with any of the foregoing symptoms, relief may be obtained by the admission of air, and the administration of any simply cordial medicine. Perhaps warm and dry cloths placed under the woman, so as to free her from the inconvenience of the wet things about her, would contribute as much as any thing to the removal of this complaint.

But when all or any of these symptoms occur, and when the faintings are also attended by excessive floodings, the danger is

so extreme, that unless the complaints can be checked, the patient hardly survives a few hours: in some of these cases the assistance of an able surgeon is required; but if such help is not at hand, cordials and light nourishment must be given in the intervals of fainting, and warm flannels should be continually applied to the breast, belly, and extremities, and bladders of warm water to the feet; the calves of the legs should be rubbed with a warm hand, and Hungary water poured on the wrists and in the palms of the hands.

But no attempts should by any means be made to rouse the patient out of these fainting fits by any act of violence, or by pouring any volatile spirits up the nose, or holding it to the nostrils; if any such stimulating or irritating matter should be involuntarily drawn up the patient's nose, while she remains in such a languid state, it might occasion suffocation, or bring on such violent coughing or sneezings, as to increase the flooding rapidly, and prove fatal in a very few minutes: if it is absolutely necessary to endeavour by some means to bring back the patient's life and sense, after they have appeared to be suspended for such a length of time as to indicate immediate danger, linen cloths dipped in cold vinegar may be applied to the nostrils, and replaced by others as they get warm and dry.

Such immoderate and excessive *floodings* as constitute a disease, and bring on danger, may be occasioned by violence used in attempting to extract the after-birth, by dragging the navel-string before the womb has had time to contract, or by tearing it and bringing it away in different pieces; by a want of contracting power in the womb, either from distension by a large burden, or by weakness produced by a long and severe labour: this disease may also be the effect of treating the patient improperly during the labour, admitting her to be suffocated by the closeness of the room,
or

or the numbers of people about her, or dosing her with wine, spirits, and spices; any violent agitation of mind during labour will also have the same effect, and in some instances a very speedy delivery.

These cases are extremely critical, and the woman will either be past hope of relief, or beyond the reach of danger, in a few hours: whatever assistance therefore can be afforded must be administered without delay; as in every moment that the disorder continues, the difficulty of cure increases.

But the extent of danger is not always proportioned either to the quantity or appearance of the blood which is lost; some habits or constitutions will support an immense discharge, whilst others are affected by a very inconsiderable excess: when the pulse flutters and sinks, the extremities grow cold, and frequent faintings occur, the danger is alarming; but when none of these symptoms attend, no consequences of a fatal nature need be apprehended.

Where the woman hath been usually subject to these floodings after preceding labours, care should be taken to guard against them by a compress tolerably firm on the belly; her head should be laid low, and she should be kept as cool and quiet as possible.

Some recommend such an exposure to air, in cases where the flooding is violent, as we cannot altogether approve; such as stripping the woman almost naked, admitting the cold air from doors and windows to blow on her body, and throwing cold water suddenly on the belly and mouth of the pudenda; but we are of opinion, that such experiments can only be justified in those desperate cases, which do not admit of hope from the use of ordinary remedies. In all common circumstances of this kind, we apprehend that the most safe, and generally efficacious external applications, are linen cloths, folded several times double, dipped in vinegar and water mixed in equal

proportions, and being wrung rather dry, applied to the belly, loins, thighs, and neighbouring parts; but as the principal virtue consists in the coldness of these applications, they ought to be very frequently renewed.

Whatever the patient takes in should be cold, and her drinks should be acidulated; nothing heating or stimulating should be permitted: the very languor and faintness, which appear alarming to those who are unused to those cases, are of service in checking the force of the circulation, and allowing opportunity for such a coagulation of the blood, as may put an immediate stop to the violence of the discharge.

The following mixture hath been recommended to be taken in the quantity of two table-spoonfuls every two hours, or oftener, according to the exigency.

Take simple pennyroyal water, simple cinnamon water, and syrup of poppies, of each one ounce—of acid elixir of vitriol, half a dram. Mix these well, and shake the bottle as often as it is used.

If the flooding occasions extreme weakness, and it is necessary to administer some nourishment, it should be of such a nature as is least heating; such as hartshorn jellies stiffened by a mixture of isinglass, sago with a small quantity of Port wine or claret, beef or chicken tea, or the jelly of calves feet; but every thing must be taken cold till the symptoms abate.

As an ultimate expedient, a mixture of cold vinegar and water is directed to be thrown up the womb, by means of a clyster pipe and bladder, and repeated till the mouths of the open vessels are diminished in size by the contraction of the womb.

But in all these cases we recommend the calling for proper assistance without delay; there are even yet means whereby life may possibly be preserved, but they are of too delicate and critical a nature to be practised by any unskilful or unexperienced hands.

Those

Those violent pains which succeed delivery, and are commonly termed *after-pains*, are occasioned by the efforts of Nature to expel clots of blood, which flowing chiefly from those vessels which are situated in that part to which the after-birth adhered, coagulate into clots, and fall in that form upon the orifice of the womb, which being thus stimulated, gradually opens, and by a spasmodic motion, resembling that of a labour-pang, are ejected and carried off; after which the orifice of the womb closes immediately, and the woman remains at ease, till other clots offering produce the same effect; and thus these pains continue at intervals, till the grumous or clotted blood is wholly discharged.

These pains are never dangerous, though they are in many cases extremely troublesome and of considerable duration; those who have had many children are most subject to them, the power of contraction in the womb being impaired by frequent child-bearing: they seldom occur in any degree of violence after the birth of the first child, nor when proper time hath been given for the spontaneous contraction of the womb to separate the after-birth, which is another reason against hasty proceedings in the labour.

After-pains are sometimes attended with a fever, nausea, sickness, and vomiting, and seldom discontinue wholly, as long as the discharge remains of a red colour.

They may be alleviated by promoting the contraction of the womb, which may be considerably assisted by warm flannels, either dry or wrung out of an emollient fomentation, or bladders filled with warm water may be applied to the belly.

The patient should also drink freely of diluting liquors, such as oatmeal gruel with carraway seeds, and tea with a little saffron and a bit of orange-peel in it; a table-spoonful of oil of sweet almonds is also recommended to be taken frequently in a tea-cupful of the common drink, in which

also a tea-spoonful or two of poppy syrup may be now and then mixed, and especially towards the hour of rest.

If heat or other feverish symptoms should attend, the following powders are advised.

Take of prepared crab's claws, one ounce—of purified nitre, half an ounce—of saffron powdered, a dram. Rub the whole well together in a mortar. Of this powder, from half a dram to two scruples may be taken every four or six hours, in a tea-cupful of the ordinary drink.

If these pains are complicated with colic or wind in the bowels, clysters may be thrown up, with small quantities of asafoetida and laudanum; and, if they are accompanied with lowness of spirits and other hysterical complaints, ten or fifteen drops of liquid laudanum, taken occasionally in a glass of simple pennyroyal water, or a cup of tea from the same herb, may give relief.

An *inflammation of the womb* is the most dreadful disease to which women are subject after child-birth; and, besides the common causes of internal inflammations, may be occasioned by a tedious or difficult labour, by efforts of violence to deliver the child or the after-birth, by too hot a regimen during the labour, by obstructions of the lochia or cleansings, arising from cold admitted into the womb or falling on the adjacent exterior parts, or by bruises and injuries either carelessly or accidentally suffered in the delivery.

The symptoms of this disorder, are a preceding chilliness or shivering, succeeded by intense heat, thirst, a quick, small, and frequently irregular pulse, and other signs of a feverish disposition; a sense of fulness and weight is felt about the womb, to which part the pain is principally confined, though it sometimes extends upwards towards the navel, or backwards towards the fundament, and at others through the groin to one or both of the thighs: the womb itself is affected with great heat and a swelling, and

as the patient turns on either side, she feels a heavy mass fall to the same side with additional pain, which is also perceivable in the loins, kidneys, and groin, of the opposite side. If the disease is seated in that part of the womb which is connected with the bladder, it will occasion a strangury or difficulty, and sometimes a suppression of urine, or the little which is discharged will be thick, foetid, and scalding; a red mark or stain extends in a line up to the navel, and turns black in the worst and most dangerous state of the disease, and a tenesmus or difficulty and pain in going to stool occurs, with a stiffness in the lower extremities, and painful sensations in moving them: if this disorder approaches during the flowing of the *red lochia* or cleanings, they are either sensibly diminished, or cease entirely.

This complaint may be removed by a spontaneous return of the lochia, or by gentle, equal, and continued perspiration; if neither of these favourable circumstances happen, nor any relief offers by a transfer of the inflammation to some other part, it terminates either in an abscess or mortification, attended with dreadful symptoms, such as delirium, *subfultus tendinum*, or violent involuntary twitches, and other signs of irritation, and in both cases generally proves fatal.

Indeed too much attention cannot be paid to pains and soreness of any kind attending child-bed women, and especially such as affect the womb or any part of the belly, coming on shortly after delivery; for if the labour has been tedious, or particularly painful, these symptoms are always alarming, and unless relieved by prudent and skilful assistance, will generally prove mortal in a very few days.

The regimen in this disease must be cooling, the food light and mild, consisting principally of spoon-meats, vegetables, and fruits; the drink should be diluting, freely acidulated, and taken plentifully; the body should be kept open by gentle laxatives,

such as lenitive electuary, cream of tartar, and magnesia; and if these should prove ineffectual, laxative clysters may be frequently administered: all pressure on the affected part must be carefully avoided, in order to which the bladder and bowels should be emptied as often as possible of the urine and fæces; the parts should be bathed with flannels wrung out of warm fomentations, and bladders filled with warm water should be frequently applied; but the degree of heat in both should be just as great as will excite gentle perspiration, and by no means such as will bring on profuse sweats.

The patient should be kept in bed as still and quiet in body and as undisturbed in mind as possible; and if the treatment now directed should produce the desired effect, and a mild and equal perspiration takes place, accompanied by a kindly warmth, and an abatement of the feverish symptoms as well as of the pain, reasonable expectations may be formed of the dispersion of the inflammation and consequent recovery.

But if, in spite of these efforts, the pain grows more acute, and is attended with a throbbing; if the symptoms of fever rather increase than diminish; if a sickness at the stomach, nausea, and inclination to vomit, occurs, with watchfulness, and such a wandering of the understanding as denotes approaching delirium; a suppuration or gangrene may be apprehended: in the former case, a favourable crisis may still offer in a discharge of the matter through the vagina or passage from the womb, which may be discovered in the appearance of the cloths, and presages a happy recovery.

When this happens, frequent injections of warm water into the vagina and womb will prevent the excoriation of the parts by the acrimony of the matter; and the Peruvian bark taken in substance, a light vegetable and milk diet, good air, and moderate exercise, will in general compleat the cure.

In

In some instances the matter is communicated to the adjacent parts, and an abscess forms in the groin, which suppurates, and the matter is discharged this way; but ulcers of this sort are difficult and slow of cure, and a lameness of long continuance is frequently the consequence.

But a favourable crisis is rather to be hoped than expected; in far the greater number of cases a mortification ensues, and little hope remains of any other than a fatal event.

The vagina, or passage from the womb, is also subject to inflammations; but as the causes and symptoms are similar to those of inflammations affecting the womb itself, the treatment and method of cure will be in all respects the same.

The *irregularity of the lochia*, or cleansing discharges, may arise either from an excessive flow, or a suppression of them.

These discharges, which follow the birth of the child and the extraction of the after-birth, are, as has been already observed, the remaining contents of those vessels which, during the pregnancy, opened into the cavity of the womb, and chiefly in that part to which the after-birth adhered: until the size of these vessels is lessened by the contraction of the womb, the evacuation will appear to be pure blood, and is then commonly called the *red water*; as the vessels contract, the discharge assumes a more pale and watery aspect, and is termed the *green waters*; and before it ceases totally, all the bloody appearance vanishes.

The appearance of matter, which this discharge takes after some days, hath been attributed to a slight suppuration affecting the internal surface of the womb a short time after the delivery, and to the dissolution or reduction to slough of the membranes which line the womb.

The quantity of the bloody lochia depends on the habit and constitution of the patient, the greater or lesser distension of the womb, and the slower or more quick

contraction of it after the labour: it may also be in a great measure affected by the treatment of the woman in delivery, and the degree of proper management exercised in extracting the after-birth.

It appears that this evacuation is a necessary discharge of a quantity of blood, which being prepared for the nourishment of the child during the pregnancy, remained unexhausted at it's birth, and must be thrown off to preserve the health of the mother; and as the milk for the future sustenance of the child is provided from the same fund, the blood which was formerly separated for the one purpose, will now be converted to milk for the other; and consequently, where the mother does not suckle her child, and the milk is to be repelled, the lochia will be necessarily more copious.

Nor is the quantity at all important as to recovery; for, provided no disagreeable symptoms appear, those who have but a trifling discharge, regain health and strength as speedily as those whose evacuation is much greater.

But, like all other evacuations, an excessive discharge of the lochia is weakening, and the patient is apt to be affected in future with diseases of the nerves, hypochondria, and general relaxation.

An *immoderate flux* of this kind is attended with weakness, loathing of food, a slow, weak, and intermitting pulse, faintings, convulsions, paleness of countenance, pains in the sides and other internal parts, tightness of the belly, giddiness, dimness of sight, and other symptoms of debility.

In urgent cases, ligatures about the wrists and ancles, and above the knees and elbows, are directed; and the regimen and treatment must be nearly such as have been already directed in cases of flooding. The bark is an admirable remedy, and may be either taken in substance or decoction, and ten or fifteen drops of the acid elixir of vitriol may be added to each dose: in slight cases,

cases, a tea-cupful of tea, or infusion of roses, with the like quantity of the elixir of vitriol, may be taken three or four times a day.

But a *deficiency* or *obstruction of the lochia*, is a disease of a nature much more troublesome, and more dangerous in its consequences, than a redundancy of this discharge; and unless the return of the evacuation can be procured, or Nature makes an effort in some other way, the event may be very fatal.

This disorder is frequently occasioned by the woman's being taken up too soon, or incautiously exposed to the cold; or it may arise from an impoverishment or defect in the blood, from convulsive strictures of the uterine vessels, from diarrhoeas or other fluxes, from inflammations of the womb, from agitations or passions of the mind, or from irregularities in the regimen.

When these discharges are defective the belly swells, and a heavy pain is felt both there and in the loins, and sometimes, though not always, in one or both groins; a heat and throbbing, or pulsation in the womb, produces restlessness and fever, the pulse grows hard and full, and other feverish symptoms occur, such as pains in the head and back, a nausea and sickness at the stomach, and sometimes vomiting and a difficulty of breathing; the face looks flushed and fiery, shiverings like those of acute fevers come on, which are succeeded by intense heats, and those by cold sweats; and as the disease becomes more dangerous, the heat and pulsation of the womb increase, a palsy seizes the lower limbs, and sometimes the patient is attacked by fits of the epilepsy. In some instances the lochia diminish gradually, and in others stop at once; and in the latter case, the sudden obstruction frequently occasions a delirium, which increasing, is followed by convulsions and death; or, if the patient escapes with life, she loses her senses, and ends her days in a state of lunacy.

The most dangerous period in which this obstruction can take place, is whilst the evacuated blood continues to be florid; it is less troublesome when it does not happen till the colour has begun to change, nor is any regard due to the smallness of the quantity, if no fever, pain, or other ill effects, are occasioned by the want of this discharge.

The immediate objects to be pursued in order to effect the cure are, to calm the mind if the obstruction has proceeded from passion or agitation of the spirits, and generally to promote the return of the defective discharge; but the means used for this end are not to be persisted in above two or three days, if they should prove unsuccessful; after that time it will be proper to wait for the efforts of Nature. If the patient outlives the twentieth day, there is said to be but little danger.

If the pulse is full and hard, from the suppression of the lochia, bleeding may be necessary; but if the pulse sinks after this operation, it must by no means be repeated, but in that case a blister may be proper.

After bleeding, the patient may drink camomile tea as often as convenient, but not in quantities sufficient to provoke vomiting; a small quantity of saffron may be added to it, and draughts may be administered of the following composition.

Take of simple cinnamon water, one ounce and half—of compound powder of contrayerva, one scruple—of salt of wormwood, ten grains. Make a draught, to be repeated every three, four, or six hours, according to circumstances. A small quantity of the cordial confection, or mithridate, may be dissolved in this draught if necessary, or ten drops of liquid laudanum may be added; and if the heat is excessive, a scruple of the diuretic salt may be substituted for the salt of wormwood.

If the suppression of the lochia hath been occasioned by the hurry and agitation of mind produced by a tedious and painful

ful labour, laxative cooling clysters will be proper, with gentle anodynes and mild perspiratives; and these medicines will generally succeed when the obstruction hath been the consequence of a cold.

Grief, anxiety, and desponding distress, sometimes impede these evacuations; in those cases the patient should be kept still in bed, her mind should be soothed, all her drinks should be taken warm, and nervous medicines, suited to the particular circumstances, should be administered, in addition to others moderately cordial.

If the lochia cannot be induced to return, and the patient is seized with shiverings, there is reason to apprehend an abscess forming in some part of the body, which is in general critical, and will carry off the complaints, if the patient's strength will enable her to support the discharge: these abscesses are usually in the breast, but are sometimes seated in other glandular parts.

Purging is not adviseable in these cases; but if a diarrhoea should come on spontaneously, it may be left to nature as long as the strength does not appear to be impaired by it; but if it continues to increase, and the patient seems to be weakened, opiates should be administered, both by the mouth and in clysters; and if the pain is considerable, and occasions restlessness, emollient clysters will be useful, as well as the anodynes.

If the suppression of the lochia is the consequence of imprudence in taking the patient up too soon, and a delirium should follow, it will either terminate in confirmed madness or lunacy, if the cause cannot be speedily removed; to this end the patient should be kept in bed, and all evacuations avoided, except perspiration; every thing that can disturb her quiet should be carefully guarded against: the draught above prescribed, with the addition of spermaceti, may be frequently administered, emollient clysters should be injected by way of fomentations, and bladders of warm water

should be applied as near as possible to the seat of the disorder.

To what has been said on the subject of suppressed or obstructed lochia, should be added cautions with respect to cleanliness, an article on which this complaint depends in many instances, and which is in all others of great importance, both towards removing it, and the prevention of other disagreeable consequences which frequently arise from neglect in this particular; such parts as are within reach should be frequently cleansed with a sponge dipped in warm milk and water, and the interior parts should be washed with injections of the same liquid: by such precautions these obstructions are frequently prevented, as well as inflammations, excoriations, sores, and other inconveniencies arising from the stagnation of the putrid lochia about different parts of the pudenda.

When the florid lochia cease, the *flow of the milk* supplies the place of that discharge; and where the lochia have been evacuated largely, the milk will succeed in proportionable quantities.

Nor is this to be considered as an evil in the generality of cases; for if the infant is put to the breast in due season, and the mother perseveres in suckling it, the flow will seldom be found to be productive of disagreeable consequences.

Indeed, after a first delivery, and in some few other instances where the child is permitted to suck, and in many where this maternal duty is not intended to be performed, the flux of milk to the breast is attended with complaints, notwithstanding the utmost precaution.

In these cases, pains, like those which precede the periodical discharges of women, are felt about the lower part of the belly, accompanied with feverish symptoms, more or less high according to the patient's habit and constitution; and these pains are followed by a troublesome distension of the breasts, with a sense of great weight, throbbing, and a sharp pain; and these symptoms con-

tinue to increase in violence for twenty-four or thirty-six hours; at the end of which time, if the crisis is favourable, either the milk discharges of itself, or is carried off by a natural sweat or a diarrhœa.

The management necessary to prevent the milk-fever, or inflammations and other diseases of the breast, must depend on the circumstance of the child's being suckled or not, different treatment being required in each case.

If the infant is permitted to enjoy the provision made for it by Nature, it should, as we have already directed, be put to the breast about twelve hours after it's birth; but as a sudden accession of milk would prove equally inconvenient to the child and the mother, sickening and nauseating the former, and producing the fever already described in the latter, endeavours should be used to bring it on gradually, by not suffering the infant to continue long at a time at the breast, nor repeating the attempt often: by this means the quantity of milk invited to the breast will in some measure be proportioned to the consumption of it; but it is impossible to give general rules for management in this particular, regulations will arise with greater propriety from observing the habit and constitution of the mother and child, which must direct in these circumstances.

But it sometimes happens, that the nipples are in such a state as to prevent the mother from giving suck, lying flat, or being buried in the breasts, so that nothing less than actual force can draw them out so far as to enable the child to take hold of them; but this difficulty may in a little time be removed by applying nipple-glasses; though some recommend the nipple being drawn by a child already used to suck, or even by a puppy.

If the milk is to be repelled, an abstemious regimen must take place, and the patient should keep her body open by gentle laxatives: some advise the breasts to be drawn

for a few days, and the milk to be lessened in this way by degrees; and others are of opinion that if the breasts are gently anointed with sweet oil, or if they are smeared with oil, by dipping a feather in it and spreading it on the breasts, and they are afterwards covered with flannels or fur, the milk will depart without farther inconvenience. But we apprehend both methods may be practised with advantage, and that if the breasts are first gently drawn, and afterwards lubricated with the oil, the milk may be got rid of with less inconvenience, than by either the suction or the application of oil alone.

But if from accidental causes, such as colds or obstructed perspiration when the child is suffered to suck, or from neglect, mismanagement, handling the breast or nipples, or attempts to extract the milk by force when it is not intended to let it be drawn off by the infant, signs of fever and distension should be continued beyond the second day, and the breasts should then grow harder, and the symptoms become more violent, an approaching inflammation may be apprehended, and the utmost care and attention will be necessary to prevent a dangerous fever, or a tumor and suppuration in one or both of the breasts.

In the first stages of these complaints, a fomentation of an infusion of camomile flowers is recommended, and should be repeated twice a day at least, or oftener if the breasts are particularly troublesome; taking great care in the mean time to keep them warm, and to promote the perspiration of the parts by covering them with flannels or fur.

The following embrocation is also prescribed, the patient having been first bled, and her bowels being properly loosened by manna and salts, senna, cream of tartar, or magnesia.

Take of the volatile spirit of sal-ammoniac, half an ounce—of camphorated spirit of wine, one ounce and half—of sweet oil, half an ounce. Shake these well together, and having

having dipped a linen rag in the mixture, lay it over the breasts, and moisten it as often as it becomes dry.

Thenipples may also be frequently washed with warm milk and water, to promote the flowing of the milk, which from the structure of the breasts, and the winding construction of those milk-vessels or tubes which terminate in the different perforations of the nipple, forming those distinct apertures from whence the milk is emitted in so many streams, cannot pass off involuntarily, with the same ease as from those animals whose vessels are larger and in a more straight direction.

If, notwithstanding the before mentioned applications, the inflammation gains ground, the hardness increases, and the pain is augmented and accompanied with throbbing and feverish symptoms, such poultices may be applied as will either answer the purposes of dispersion or suppuration: for this purpose the common one of white bread, milk, and oil, is equal to most others, though some rather recommend it's being composed of linseed flour wetted with warm water; nor should this application be confined to the mere seat of the pain, but the poultice should be spread large enough to cover the whole breast.

If a suppuration is unavoidable, support the breast with a handkerchief suspended from the neck, and promote the ripening, by renewing the poultices three or four times a day, never suffering it to remain on long enough to get cold, hard, or disagreeable.

It has been the practice to make openings in these abscesses during the state of inflammation, from an idea that the pain might be lessened by such an operation, but this is an expedient of a most pernicious nature; for, after these premature discharges, new collections of matter will be made, and so from time to time till the whole breast is destroyed, or a scirrhus formed by repeated inflammations, which seldom fails to terminate in sinuous ulcers, if not in a cancer.

If a knife is to be used, which we confess we think in most cases much better avoided, the incision should be made in a semicircular form, both to avoid wounding the nipple itself, and the little circle which surrounds it; by making the wound in this form, both the beauty and future usefulness of the part may be preserved.

The ulcer may be dressed with yellow basilicon spread on pledgets of lint, or with spermaceti ointment, over which dressings the poultice should be continued while either the inflammation, hardness, or pain, remains.

These abscesses are more or less troublesome and obstinate, as they are seated deeper or more superficially; if they lie low they proceed more slowly to suppuration, are very painful, and the fever which attends them is considerable; and unless these abscesses are very skilfully treated, they impair and weaken the constitution, and induce a general bad habit; but when they are situated near the surface they ripen, break, and heal speedily, and are sometimes attended with so little inconvenience, that the woman continues to suckle her child, as well during their formation, as while the wounds occasioned by them are healing.

Among other complaints, to which child-bed women are subject, sore nipples, though apparently of no great consequence, are frequently so extremely troublesome, as to put the mother to great torture, or to compel her to relinquish suckling her child.

The nipples may either be affected by excoriations of the skin, and consequent rawness, or by chaps or fissures occasioned by ulcerations.

When the nipples are diseased in either of these ways, the continual suction of the child, and the acrimony of the milk, render it a difficult matter to heal them, or to rescue the woman from the pain and distress of an indisposition, which is always considered as of a very trifling nature.

Though women are principally subject to sore nipples at the first or second lying-in,

in, and they are generally so hardened by frequent suckling, that they escape this disagreeable complaint, yet instances are not uncommon where it attends every child-birth, and where the mother looks forward with anxiety to the pain she is to endure from it.

Variety of remedies have been prescribed for this complaint, but none of them promise much relief, without some management with respect to the frequency of the child's sucking; for no sooner does the excoriation begin to skin over, or the chaps to heal, than the eagerness of the infant to draw it's favourite support undoes the effect of the best concerted prescription: if it can be so contrived that one nipple may be favoured at a time, both may be healed; but even this is attended with some difficulty, on account of the necessity of drawing off the milk, lest the increase of it may produce inconvenience to the breast.

On the first approach of soreness, the nipples should be frequently washed with a little brandy and water, the quantity of each in the mixture being proportioned to the degree of smarting which is occasioned by the use of it: some advise alum water, Veleno's vegetable mineral water properly diluted, or Hungary water; some recommend japan earth dissolved in water, and others sprinkling the nipple with gum Arabic powdered; and they should be covered either with nipple-glasses or pieces of thin lead, perforated or fitted to the shape, the cooling quality of which latter may be serviceable in allaying the inflammation, at the same time that they serve to defend these tender parts from being rubbed by the linen or other garments; a solution of sugar of lead is also sometimes of use, which may be made as follows.

Take of sugar of lead, fifteen grains—of rose water, half a pint—of distilled vinegar, half an ounce. When the lead is dissolved, shake it well, let it subside, and filter it through paper; the strength may either be increased

or diminished, by adding to or lessening the quantity of the sugar of lead.

To make alum water.

Take of powdered alum, half a dram—of boiling water, half a pint. When the alum is dissolved, shake the mixture; and filter it through paper when it is cold and has perfectly subsided.

But when the nipples are so ulcerated that the fissures or chaps are deep, occasioning intense pain on every attempt of the child to suck, the difficulty of cure is increased, none of the foregoing remedies will prove effectual, and it is sometimes absolutely necessary to wean the child, to prevent the nipples from being totally destroyed.

Yet, even in these aggravated cases, means may be tried to avoid the necessity of this disagreeable expedient; the nipples may be frequently washed with warm milk and water, and particularly just before the child is to take them, which will somewhat abate the sensibility of the part, and render the pain more endurable; or the following softening liniment may be gently struck on the parts affected with a feather.

Take spermaceti and sweet oil, of each half an ounce—of white wax, two drams. Melt the whole together, stirring it till it is cold.

Or dossils of lint may be dipped in this liniment, and laid over the chaps, and the whole covered with a pledget of fine flax spread with it.

But we have known the following application succeed, when every other attempt to give relief hath proved fruitless.

Take an ounce of quince seeds; boil them in half a pint of water till it becomes a thick jelly or mucilage. Spread pledgets of lint with this jelly, and apply to the different chaps, and cover the whole nipple with a singed linen rag dipped in it.

Sore nipples may sometimes be prevented by

by proper precautions before the birth of the child, and to this end they may be frequently bathed with brandy, or the alum water or solution of lead already mentioned; but for this purpose an equal proportion of white vitriol should be added to the former, and the quantity of sugar of lead in the latter should be doubled.

Pimples round the nipple are frequently occasioned by the thrush in the child, and this should be attended to the moment such a symptom appears.

The fevers to which child-bed women are more particularly subject, are *milk fevers*, *milliary fevers*, and those which are called *puerperal* or *child-bed fevers*.

Of *milk fevers* we have already treated under inflammations of the breasts, and *milliary fevers* have been described, and proper directions for treatment and cure given, among the other classes of fevers. The *puerperal fever* is the most fatal which attends women in this situation, and deserves the most particular attention.

The *puerperal fever* generally comes on about the third day after delivery, but sometimes, though not often, earlier, and very rarely not till the fifth or sixth day.

The irritable state of the womb after a pregnancy and labour extends itself throughout the whole frame, and hence excess of heat or exposure to cold, or any other circumstance which can excite a fever, may be the cause of that of which we now speak; it may also be occasioned by the sudden emptying of the womb when the membranes were full of water, and the blood rushing into these emptied parts with too much violence to be regularly returned may excite inflammation: this fever may also be produced by coagulated blood lodged in the womb after delivery becoming putrid by the access of air, by obstructions of the lochia, by a putrid air, by the coming of the milk, by the absorption of sour and acrid milk, or inflammations in the breast arising from that cause, and by great costiveness and retension of the excrements.

The approach of this fever is denoted by heat, thirst, and a quick pulse: if the womb is inflamed by the absorption of putrid blood, the lochia will be obstructed or diminished; and in the latter case the discharge comes away in small lumps, and in this situation matters remain for three or four days.

At length the fever grows high, and it's increase is preceded by universal shiverings, which are followed by an additional quickness of the pulse, which also becomes low and weak; the patient complains of intense thirst, violent pains in the head, want of rest, oppression of the breast, and lowness of spirits, occasioning frequent and deep sighs; these symptoms are succeeded by general weakness, restlessness, a wildness approaching to madness, or a despair inclining to melancholy, in the countenance, inflammations in the eyes and stiffness about the lids, with a pain in the side, a difficulty of breathing, and a dryness of the skin, and the tongue is of a glossy brown colour, dry, and parched; in the advanced state of the fever, if a hand is laid on the patient's skin, and continued there sometime, it communicates to it the same kind of pricking sensation as is felt after dipping the fingers in warm putrid blood: from the urine no judgment can be formed, because it is constantly mixed with black putrid blood draining through the vagina. As the fever increases a diarrhoea comes on, and the stools are black, liquid, and extremely offensive; the tongue turns to a reddish colour, and pimples, or a kind of thrush, appear in the mouth; the breasts are loose and flabby, and upon their being drawn, blood is frequently discharged instead of milk; in some instances the belly swells during the course of the disease, but it never fails to be affected with extreme soreness, and a delirium is usual from the time the fever begins to be violent.

When an inflammation of the womb is the immediate cause, the symptoms are somewhat various: pains resembling after-pains

shoot from the loins and belly into the groins and thighs, and continue with few intermissions; the fundament and neck of the bladder become extremely tender, the tongue is white but moist, the belly bound, and the lochia are either wholly suppressed, or the discharge is of a brown colour resembling coffee-grounds.

If this fever is produced from inflammation of the bowels, or other abdominal intestines, the belly is first affected with a sense of weight and dull pain, and the patient is commonly costive, but the pulse is not so quick as in other cases, nor the heat so considerable; but as the fever grows high a diarrhoea comes on, and the symptoms resemble those of fatal bruises in the belly.

If this fever is occasioned by putrid air or unwholesome effluvia, the disorder may be distinguished from an original disease of the womb, by the lochia being at first regular and uninterrupted, and the after-pains, if it attacks during the continuance of them, being unaccompanied with inflammatory symptoms.

An extraordinary quickness of the pulse, occasioned by the extreme irritability of the patient, also marks puerpural fevers; and it may be observed, that unless this, together with other symptoms of fever, attend, no considerable degree of danger need be apprehended from the soreness of the belly, or the flaccid appearance of the breasts.

In our endeavours to remove this disorder, the state of the patient during delivery must direct the first steps: if she do not lose much blood at the time, and the pulse is hard and quick, it may be necessary to take off a small quantity; on the contrary, if the evacuation at that time was copious, the operation of bleeding must be omitted, and emollient clysters of milk and water with sweet oil should be administered every three or four hours, or at greater intervals, according to circumstances, and a dram of Glauber's salts may be given after each clyster, or less frequently, according to the

effect it produces; if the salt passes through the bowels too quickly, a few drops of liquid laudanum may be added: great care must be taken in the injection of the clysters, on account of the tenderness of the parts.

If the stomach will not retain the salts, a grain or two of calomel may be given with one third of a grain of the emetic tartar, and after a stool or two has been obtained the following draughts.

Take of simple mint water, one ounce and half—of the diuretic salts, half a dram—of antimonial wine, thirty drops. Make a draught, to be taken every fourth or fifth hour. One fourth of a grain of the emetic tartar may be substituted for the antimonial wine; and if these draughts pass away too freely by stool, two or three drops of liquid laudanum may be added to each dose.

If these draughts are productive of perspiration they should be continued; but if they fail of having this effect, and the bowels seem to have been sufficiently emptied, the following bolus and draught may be given every four or five hours.

Take of crude sal ammoniac, from fifteen grains to a scruple, according to circumstances—spermæti, and compound powder of crabs claws, of each ten grains—of conserve of wood sorrel, enough to make a bolus.

Take Mindenerus's spirit, and simple mint water, of each one ounce. Make a draught.

Some recommend saline draughts of the usual composition, with the addition of a few drops of liquid laudanum, or a spoonful of poppy syrup, if the stools are too frequent.

The patient's food should be light and low, and the drinks diluting: water with a toast is perhaps the best that can be given; but if the disease is of long continuance, and the patient is considerably weakened, she will require to be strengthened with white wine whey, negus, and some more nourishing food.

If

If the frequency of the stools should threaten to exhaust the patient too much, a clyster with starch, and from twenty to forty drops of liquid laudanum, may be injected occasionally, and the drink should be in that case water in which gum Arabic has been dissolved, in the proportion of half an ounce to a pint.

But when the looseness degenerates to a confirmed diarrhoea, the disorder has passed the inflammatory stage, and approaches to a putrid state, and different treatment is required.

The discharge is not to be immediately or suddenly stopped, but it will be proper to assist Nature, by rendering the matter which irritates the intestines less active, by correcting the state of the fluids universally, by lessening the irritability of the habit, and by giving such antiputrescent diuretics as may defend the nerves of the first passages from irritation, and carry off whatever putrid matter falls upon the intestines, without it's operating as a violent purge.

To answer these purposes, the following medicines are prescribed.

Take columbo root, and rhubarb, both powdered, of each ten grains. Make a powder, to be taken every three or four hours.

Where the pulse is full, and the heat considerable—

Take of camomile flowers powdered, twelve grains—of starch, ten grains. Make a powder, to be taken every four or five hours, or oftener, according to the urgency of the symptoms, washing each dose down with a tea-cupful of the water in which the gum Arabic hath been dissolved, adding to it from fifteen to twenty-five drops of the sweet spirit of nitre.

The bark is however the remedy principally to be relied on in this stage of the disorder, and may be given in substance or the decoction, and in such quantities as the pa-

tient's stomach will bear; but the administration of this medicine ought not to commence till the pulse sinks and the feverish heat is abated: at least, if the bark is given during the existence of these symptoms, ten drops of the sweet spirit of nitre should be added to each dose, and two or three drops of liquid laudanum; but if the diarrhoea goes off and leaves the fever, it will be proper to substitute a few grains of rhubarb for the laudanum.

If the pulse should sink too low, and a nervous oppression follows, an ounce of the camphorated julep may be given every three or four hours, to revive and support the patient's spirits; and her drinks may be acidulated with the spirit of sea salt.

This disorder is said to be particularly infectious; and, when persons in the same condition are much together, as in lying-in hospitals, and other public receptacles of women for delivery, is frequently epidemic, and extremely fatal.

As it commonly arises from injudicious management in and after labours, and particularly from colds caught in consequence of keeping patients too warm at first, and exposing them to the air too soon after, precautions in these particulars will be the most likely means of avoiding or preventing this dangerous and troublesome disease.

Having now given general cautions and directions for the treatment and management of women, from the first moments of perceivable pregnancy to the last occurrence of danger after child-birth, we shall add a few plain Receipts for such Food and Liquors as are proper for patients after delivery; for though the nurses of the metropolis, and many others who devote themselves wholly to this employment, are generally well acquainted with these matters, yet this is not altogether the case in the country, nor does a skilful and experienced nurse always fall to the lot of women whose situations enable them to seek for the best assistance of this sort.

To make common caudle.

Take of water gruel boiled smooth and to a proper consistence, and mild ale, of each a quart. Boil it ten minutes together, stirring it continually. If necessary strain it off, and add nutmeg and sugar to the taste. Eat a bit of toasted bread with it.

Wine caudle.

To a pint of water gruel, boiled rather thick and strained, add a little cinnamon, a clove or two, and a bit of fresh lemon-peel. Let it boil a few minutes, and add a large glass of white wine, and nutmeg and sugar. If the patient's stools are very frequent, Port wine may be added instead of white wine.

To make panada.

Boil two ounces of stale bread in a pint and half of water, till the bread falls abroad and the mixture becomes smooth: it must not be stirred whilst it boils. Eat it with nutmeg, sugar, and a little white wine.

To boil sago.

Take two ounces of sago, and a full pint of water; boil it over a slow fire, stirring it constantly till it is thick. Add grated nutmeg or powdered cinnamon, a spoonful or two of white wine or Port, according to the state of the patient's body, and sugar to the taste.

Salop.

Take of the powder of salop, a table-spoonful—of water, a pint. Mix the powder in a small quantity of the water, and then add the rest. Set the mixture over a clear fire, and stir it till it thickens to a jelly. Add nutmeg, wine, and sugar.

To make egg caudle.

Beat the yolks of two eggs well with a little sugar; then set a saucepan over the fire with a pint of new milk, and having mixed a

spoonful of flour with three or four spoonfuls of milk, and added to it the egg and sugar, throw the whole into the milk as soon as it boils: stir it constantly till it boils up again, then add two or three spoonfuls of white wine; let it boil a third time for a minute, and add a little grated nutmeg.

To make chicken, beef, mutton, or veal tea.

Take of lean meat of either kind, nicely separated from skin and fat, half a pound—of water, a quart. Skim it after it begins to boil as long as any froth arises, then add a little mace; let it boil a quarter of an hour longer, pour it into a basin, and when cold take off any fat that may have risen to the surface.

To make chicken broth.

Take half a pound of the flesh of a chicken, without skin and stripped of the fat; cut it into very small pieces, and boil it an hour in a quart of water, taking off the scum carefully as it rises; then add a little mace, and an unburnt crust of bread; let it boil a quarter of an hour longer, then pour it off carefully, and set it by for use. Neither broths or teas of animal flesh should be salted till they have nearly done boiling.

To make mutton broth.

Take one pound and quarter of the lean flesh of a loin of mutton, and two quarts of water; let it boil a few minutes, taking off the scum very carefully; then add a few grains of whole pepper, and boil it till the meat is quite tender; then take out the meat, and add an ounce of rice or of pearl barley, and boil it till it is soft: thyme, parsley, or a small quantity of onion, may be added, if agreeable.

To make a soup without flesh.

Take half a pint of green or dry peas, according to the season; boil them in three quarts of water, adding a bunch of pot-herbs, and half a dozen onions. As soon as the whole is

is boiled perfectly tender, beat the vegetables with a spoon, and force the pulp with the liquor through a sieve; set it on the fire, and when it boils add a lettuce, a turnip cut small, and cellery. Season with pepper and salt, and eat with toasted bread.

Soup maigre.

Take turnips, carrots, cellery, lettuce, endive, the inner part of a cabbage, two or three potatoes sliced, half a dozen onions, and a handful of green or dry peas. Cover these vegetables with water, and boil them in an earthen pipkin till they are perfectly tender, then beat them; strain the whole through a sieve, and add some fresh herbs cut small, a little pepper and salt, and a crust of bread. Boil till the herbs are moderately tender.

A bread pudding.

Boil a pint of milk with a piece of fresh lemon-peel; pour it boiling hot over the crumb of a two-penny loaf; cover it up close, and let it stand till it is cold; beat the yolks of three eggs, with a little sugar, and a spoonful of rose water, and mix it with the bread, working the whole well together, and adding a little powdered cinnamon or grated nutmeg, according to taste; tie the pudding in a cloth, boil it an hour, and make a sauce with white wine, melted butter, and sugar. A pudding may be made of a French roll without eggs, but it must not be boiled above half the time allowed for the former.

An oatmeal pudding.

Stir half a pound of oatmeal in a quart of water, till the floury part is well mixed with it; strain it off through a fine sieve, set the liquor over the fire, with a bit of cinnamon and a piece of lemon-peel, and boil it, stirring it the whole time till it acquires a certain degree of thickness, equal to that of good jelly: add a spoonful or two of orange flower water, and the same quantity of white wine, with sugar to the palate. Bake it, either with or without a crust round the edge, and grate sugar over it when it is ready.

A common rice pudding.

Boil four ounces of rice in a little water till it begins to swell; then take it off, pour away the water, and let the rice stand till it is cold; put it in a baking-pan, and add to it a quart of milk, a little powdered cinnamon, and sugar to the taste. Butter a dish, and bake it.

Another bread pudding without eggs.

Pour three pints of milk, boiling hot, over the soft of a two-penny loaf; cover it close, and when it is cold grate some of the yellow rind of a Seville orange, and add it with sugar and powdered cinnamon to a glass of white wine and orange flower water, mixed in equal proportions; beat the whole together with the bread till it is tolerably smooth. This pudding may either be baked or boiled; if the latter, it must be put over the fire in a pan and stirred till it is thick, and then boiled in a cloth, and eat with lemon-juice, sugar, white wine, and nutmeg grated, if agreeable.

A batter pudding.

Take four spoonfuls of flour, a full pint of milk, the yolks of four eggs, with the white of one; season with nutmeg or ginger, and a little salt: beat the whole well together. Boil the pudding three quarters of an hour, and eat it with the same sauce as the last.

To make hartshorn jelly.

Take a pound of the shavings of hartshorn, and three quarts of water; boil in a close vessel till it is nearly half consumed, and then add half an ounce of isinglass; boil again till the liquor is reduced to a quart; strain off the liquor, and add to it half a pound of fine sugar, half a pint of white wine, and lemon or orange juice to the taste. Boil the whole liquor together till on trial it appears to jelly well, and then pass it through a flannel bag.

Calves feet jelly.

Boil three calves feet slowly in six quarts of
6 D water

water till it is reduced to three pints; skim off the fat during the boiling, strain, and let it stand till it is cold, then take off the top and bottom part of the jelly, so as to free it perfectly from fat and sediment; melt the clear jelly, and add to it white sugar, and lemon or orange-juice, as directed above, and a bit of the yellow rind of orange or lemon; let it boil up, and then run it through the jelly bag. In order to make it transparent, the white of four or six eggs may be beaten up with a whisk, and added to the mixture during the last boiling.

To make barley water.

Take six ounces of pearl barley, and wash it carefully in hot water; after which let it stand till it is cold; then add three quarts of boiling water to the barley, set it on the fire, and let it boil gently till half the quantity of water is consumed. Strain it for use.

Rice gruel.

Take of ground rice, three ounces—of water, two quarts—of cinnamon bruised, two drams. Boil it three quarters of an hour, and strain it. It may be acidulated with lemon or orange-juice, and sweetened to the palate.

Oatmeal gruel.

Mix three table-spoonfuls of oatmeal in a small quantity of water, and add more water gradually to the quantity of a quart, stirring it that it may not gather in lumps; boil it a quarter of an hour, stirring it the whole time. Strain it off, and it will be ready for use, either with sugar and wine, or salt, according to circumstances and the patient's taste.

To make imperial water.

Take of cream of tartar, two drams—of lemon or orange-peel, pared very thin, about a dram—and two ounces of fine sugar. Pour on these ingredients two quarts of boiling water, and cover close. When it is

cold pour it off very carefully. It ought not to be kept longer than forty-eight hours.

White wine whey.

Take two thirds milk, and one third water; set it over the fire in a very clean vessel; as soon as it boils up, throw in the quantity of an eighth of the mixture, or rather more, of white wine; let it just boil again, skim off the froth, separate the curd with a spoon, and pour the clear whey off carefully. If it is required to be perfectly fine, it may be rendered so by the addition of the white of an egg, but in that case it must be strained.

Cream of tartar whey.

Set a quart of milk over the fire; then dissolve a dram of cream of tartar in a jill of boiling water. As soon as the milk boils up throw in the cream of tartar water; let it boil a moment, skim it, and separate the curd.

To make lemonade.

Take two drams of fresh lemon-peel pared very thin—of lemon-juice, two ounces, if the lemons are fresh; or two ounces and a half, if they have been long kept—of fine sugar, a quarter of a pound. Pour three pints of boiling water on the ingredients, cover it close in a jug or other earthen vessel, and decant it off fine when it is cold.

A liquor of the same kind may be made with juice and rind of oranges; but the proportion of sugar may be somewhat smaller.

Infusions of herbs, for diluting drinks, may generally be made in the proportion of a handful of the green herb, or half as much more of the dry, to a quart of water. These infusions should not be suffered to remain on the herbs above ten minutes, and it is always adviseable to make a small quantity at a time, and to have it fresh as often as it is wanted. If the herbs are on long.

long stalks, or the leaves large, it may be necessary to cut them up before the water is poured on them. Where those infusions are of a disagreeable flavour, it may in general be remedied by adding a small piece of fresh lemon or orange rind.

No general directions can be given for making *decoctions*; but if they are of roots,

they should be sliced or well bruised: and it may be observed, that in most cases the length of time during which they are commonly directed to boil is wholly unnecessary, the virtues of most roots and woods being extracted in twenty minutes, or half an hour, and of some in a much shorter time.

B O O K VII.

Of the Diseases peculiar to Seamen ; and those of particular Climates.

CHAP. I.

Of the Sea Scurvy.

THOUGH the distinction of *land* and *sea scurvy* hath been usually made, yet perhaps no sufficient reasons can be offered for fixing either of those denominations; certain it is, that long voyages at sea have been generally productive of this disorder in it's most aggravated state; but it is equally certain that garrisons and armies, in particular situations, and under peculiar circumstances, have been alike subject to it's ravages, and that the symptoms in the latter cases have in some instances been exactly similar to those which have appeared in the former.

Nor does the general idea, that the prevalence of this disorder at sea may be attributed to the use of salt meats, appear to be well founded; modern instances have occurred where whole ships crews have subsisted for two years together on provisions so hardened by salt, that the very taste of the meat hath been lost, and yet no scurvy has made it's appearance among them; and others, equally well attested, of it's raging with violence even in whole squadrons, when they have only been debarred from fresh provisions during a course of a few weeks: and the Tartars, who deal less in salt than any nation in Europe, are so subject to this disease, that it sweeps away the inhabitants of villages and towns, and threatens to depopulate the country.

If we may venture to offer an opinion on a subject which has been so copiously and

learnedly discussed, we should acknowledge ourselves satisfied that it proceeds from a concurrence of causes, and that improper, gross, and corrupt food, of any kind, moist and damp air, accompanied either with cold or heat, and impure putrid water, are conjointly productive of the disorder which is called the *sea scurvy*.

The appearance, progress, and effects of this disease, have been so accurately and ably described by the ingenious editor of Lord Anson's Voyage round the World, that we shall be enabled from thence to give a more faithful and extensive account of the various symptoms of the sea scurvy than can be collected from all the best writers on this important subject.

Most of our readers are acquainted with the difficulties which occurred in the early part of a voyage, undertaken at an improper season of the year, with ships unprovided for the exigencies of so desperate a service, insufficiently manned with raw and unseasoned mariners, and reinforced by a regiment of invalids, collected from hospitals and garrisons where they had apprehended themselves laid up for their lives, after spending the terms of their manhoods, and spilling their best blood, in a series of hard services and severe conflicts.

Thus equipped and manned, this squadron pursued it's voyage through tempests and seas, which baffled the efforts of an enemy's fleet that sailed about the same time to oppose

oppose them; and, after having surmounted difficulties, and escaped dangers, which seemed to oppose their attempt with more than human force, they pushed through the Straits of Le Maire into the great Southern Ocean.

But by the latter end of the month of April, being soon after the time that this passage was effected, the scurvy began to make it's appearance in this devoted squadron; and the long continuance at sea, the fatigue, and the various disappointments they had met with, had occasioned it's spreading to such a degree, that there were but few on board who were not in some degree affected with it: in the month last mentioned, not less than forty-three died of it on board a single ship, the *Centurion*. It was then apprehended that the disorder had risen to an extraordinary height, and hopes were entertained by these voyagers, that as they advanced to the northward it would abate of it's malignity; but these were vain expectations: in the following month the number of dead were almost doubled, and as they did not reach any land till the middle of June, the mortality continued to increase; so that after the loss of two or three hundred men, they could at last only muster six common seamen on a watch capable of duty.

After remarking that this disorder, so frequently attending all long voyages, and so peculiarly destructive in that which he is describing, is the most singular and unaccountable of any that affects the human body, this ingenious Journalist observes, that it's symptoms are inconstant and innumerable, and it's progress and effects extremely irregular; for scarce any two persons have the same complaints, and where some conformity hath been found in the symptoms, the order of it's appearance hath differed totally.

Yet though it frequently assumes the form of other diseases, and therefore is undescribable by any conclusive and infallible cri-

terion, there are some symptoms more general than the rest, and which, as they occur oftener, deserve a more particular enumeration. These common appearances are, large discoloured spots dispersed over the whole surface of the body, swelled legs, putrid gums, and, above all, an extraordinary lassitude of the whole body, especially after any exercise, however inconsiderable; and this lassitude at length degenerates into a proneness to swoon on the least exertion of strength, or even the smallest motion. This disease is likewise usually attended with a strange dejection of spirits, and with shiverings, tremblings, and a disposition to be seized with the most dreadful terrors on the slightest incident: and in the voyage from whence this description is extracted, it was remarkable in all the reiterated experience of this malady, that whatever discouraged the ships crews, or in any way damped their hopes, never failed to add new vigour to the distemper, for it usually destroyed those who were in the last stages of it, and confined those to their hammocks who were before capable of doing some kind of duty; so that it seemed as if alacrity of mind and sanguine hopes were no contemptible preservatives from it's fatal malignity.

But it is not easy, says that excellent writer, to compleat the long roll of the various concomitants of this disease, for it often produced putrid fevers, pleurisies, the jaundice, and violent rheumatic pains; sometimes it occasioned an obstinate costiveness, attended with a difficulty of breathing, and this was esteemed the most deadly of all the scorbutic symptoms; at other times the whole body, but more especially the legs, were subject to ulcers of the worst kind, attended with rotten bones, and such a luxuriancy of fungous flesh as yielded to no remedy.

But a most extraordinary circumstance occurred in the progress of this disease; the scars of wounds which had been for many years healed, were forced open again by the

virulence of the disorder; and in one most remarkable instance, an invalid, who had been wounded above fifty years before at the battle of the Boyne, and whose wounds having been soon healed, he had continued in good health till the present voyage; yet being attacked by the scurvy, his wounds, in the progress of the disease, broke out afresh, and appeared as if they had never been healed; and what is still more astonishing, the callus of a broken bone, which had been compleatly formed for a long time, was found to be dissolved by this disease, and the fracture seemed as if it had never been consolidated: indeed, the effects of this disorder seemed to be in a variety of instances wonderful; many of the crew, though confined to their hammocks, appeared to possess no inconsiderable share of health, for they eat and drank heartily, were chearful, and talked with apparent vigour and in a loud tone of voice; yet, upon their being subjected to the smallest motion, though it was only from one part of the ship to the other, and in their hammocks, they in some instances expired immediately; and others, who confided in their seeming strength, and resolved to get out of their hammocks, died before they could well reach the deck; nor was it an uncommon case for those who could do some kind of duty, to drop down dead in an instant on an extraordinary exertion, many of the mariners perishing in this way on the voyage.

Upon the arrival of the squadron at the island of Juan Fernandes, one hundred and sixty-seven sick persons were put on shore from the Centurion only, and a dozen at least died in the boats as soon as they were exposed to the fresh air. Nor did the mortality cease with their arriving at land; great numbers died after they were brought on shore, and those who survived recovered by very slow and almost insensible degrees, so far as to leave their tents and crawl about in the air; but as soon as they had acquired

strength enough to accomplish this, a general restoration followed very speedily.

Yet the Gloucester, another ship of the squadron, though she had suffered a still heavier loss of men, and had actually buried near three fourths of her crew, and had not eighty on the sick list when they were brought ashore, had much better success in the recovery of the few that remained, scarce any of them dying after they reached the land; a difference which the editor of this voyage very rationally attributes to the fresh provisions and vegetables, which were sent on board the ship before she could collect strength enough to come to an anchor, which she was some days in effecting, and which had prepared the remaining sick for a more speedy recovery.

In those two ships it appears, that the loss of men, from the time they had left England to the cessation of the mortality on the last mentioned island, amounted to near six hundred men, and almost the whole number by this fatal disease, which seemed to fall more severely on the soldiers, marines, and invalids, than on the seamen; on board one ship, out of fifty invalids and seventy-nine marines, only four of the former and eleven of the latter remained alive, and in the other every invalid died, and only two marines escaped out of forty-eight.

After the sick had been recovered, and the crews refreshed at this island, the squadron proceeded to cruize on the coast of Mexico, and flattering hopes were entertained, that as no remains of the disease now appeared, warmer climates, to which they were approaching, would have contributed to prevent it's return, or at least have mitigated it's violence and lessened it's fatality; but in less than seven weeks after they had quitted the coast of Mexico, the fatal disease broke out again among the crews, and not only convinced them of the fallacy of their expectations, but exploded an opinion about the cause and nature of this disease, that plenty of provisions and fresh

fresh water are effectual preventives of this malady; but in the present case a very considerable stock of hogs and fowls had been taken on board, on a successful landing which had been made on the coast, great abundance of fish were taken every day, and the rainy season had supplied them with such plenty of water, that each man had an allowance of five pints a day, yet neither were the sick relieved, or the progress and advances of the disease retarded.

Nor did these voyagers find themselves delivered from this calamity even by the strictest attention to cleanliness, or the most liberal admission of fresh air, though both have been generally considered as highly efficacious, if not in actually preventing, yet at least in alleviating the horrors of this disease; on the contrary, the utmost pains that could be taken in cleansing and sweetening the ship, and the opportunity that offered of keeping all the ports open during the latter part of the run to Tinian, yet neither of these precautions seemed to produce any sensible abatement in the virulence of this disorder.

It was in this part of the voyage that the surgeon of the Centurion, having exhausted his utmost efforts for the relief of his numerous patients, and found all the measures he adopted totally ineffectual, resolved to try the effects of Ward's pill and drops, medicines which had been at that time greatly celebrated, and one or both of them at different times were given to persons in every stage of the distemper. Out of the numbers who took them, one was seized with a violent bleeding at the nose soon after swallowing the pill, and though he was before given over by the surgeon, and lay almost at the point of death, yet after this hæmorrhage, he immediately found himself much better, and continued to recover, though slowly, till his arrival on shore a fortnight afterwards completed his recovery.

But of the others who took these me-

dicines, none appeared to receive any material benefit: some were relieved for a few days, but the disease returned again with as much virulence as ever; though neither these, nor the rest who received no benefit, appeared to have been reduced to a worse condition than they would have been if they had taken nothing.

The most remarkable property of these medicines, in almost every one who took them, was, that they operated in proportion to the vigour of the patient; so that those who were so reduced as to be within two or three days of death, were scarcely affected by them, and as the disease was differently advanced, the operation was either a gentle perspiration, an easy vomit, or a moderate purge: but if they were taken by one in full strength, they then produced all the before mentioned effects with considerable violence, which sometimes continued for six or eight hours without intermission.

Upon the arrival of the Centurion at the Ladrone Islands, the salutary influence of the land was soon perceivable; for though they had buried in two days before twenty-one men, yet they did not lose above ten more from the day after they were landed, and reaped so much benefit from the fruits of the island, and particularly those of the *acid* kind, that in a week's time there were but few of the sick who were not so far recovered as to be able to move about without help.

In a later voyage, for the discovery of a North West Passage, it was remarked, that this disease began to make its appearance soon after the crew, who were before healthy, had met with an opportunity of indulging themselves too freely in the use of spirituous liquors; and the progress of this fatal distemper among those who made this voyage is thus described. The men when first seized with it began to droop, to grow heavy, listless, and at length indolent to the last degree; then followed a tightness in the chest,

chest, pains in the breast, and a great difficulty of breathing: to these symptoms ensued livid spots upon the thighs, swelled legs, contraction of the limbs, putrid gums, loose teeth, a coagulation of blood upon and near the back-bone, with countenances bloated and fallow; and these symptoms continued to increase till death carried them off either by a flux or a dropsy.

The medicines which, in other countries, are generally used with good effect, proved ineffectual here; for unctions and fomentations, when applied to contracted limbs, afforded no relief. Fresh provisions, when they could be procured, seemed to be of some use, but did not produce lasting benefit.

The relater of this voyage says, the only powerful and prevailing medicine was tar-water, the steady use of which saved many, even after the disease was far advanced; yet the boasted efficacy of this remedy seems to have fallen far short of certainty, as it is acknowledged, that after the ship departed from the port where tar-water appeared to have been used to advantage, the crew began to relapse into their old distemper, and many of them died of it, both in pursuing the voyage and on the passage home.

Nor have the effects of this disease been less terrible in armies than in fleets: and the following account of the progress and symptoms of a distemper among the Imperial troops in Hungary, in the year 1720, brings it so near that we have just described, that little doubt can remain of its being the same disorder.

In the first stage the gums are swelled, and are stained with livid spots, and these symptoms are followed by great putrefaction, a most offensive stench from the mouth, and the loosening and dropping out of the teeth.

In the second stage or degree of this malady, there is for the most part such a contraction of the joint of the knee, that the pa-

tient cannot extend his leg; shooting pains are felt in this and other joints of the body, and the contracted knees are also swelled; with incredible pain and stiffness of the tendons, and the skin is covered with bluish extravasations, interspersed with small millary eruptions: in one night's time the eyes, and even other parts of the body, are covered with large livid spots, as if the patient had received bruises; the muscles of the legs and even the cheeks become swelled and hard, but these swellings never suppurate; the pulse is quick, small, and hard; and the urine red, with a thick unequal sediment.

If the patient continues the use of improper diet, as must be the case with many of the common soldiers, for want of necessities and conveniences, the malady advances to the third stage; the gums, together with the cheeks, become prodigiously swelled; a gangrene or rottenness of the jaw ensues, both which prove incurable; the difficulty of breathing is so great, that the patients not only faint away upon the slightest motion of the body, but frequently drop down dead suddenly as they are walking about; they generally complain excessively of this asthma a few days before death, though they are neither troubled with a cough or spitting. All the species of dropsies and puffy swellings on the body accompany the advanced stage of this calamity to such a degree, that if the patient lies with his head in a declining posture for half an hour, it becomes so swelled that he is unable to open his eyes, and these swellings often disappear and return: they are subject to profuse hæmorrhages from the nose, and in these deplorable circumstances to a diarrhœa or dysentery, which often closes the scene. In the beginning of these diseases, neither the appetite or thirst suffer any material alteration; but towards the height of the malady the former falls off, and the latter becomes extremely urgent.

The

The medical author, from whose experimental remarks this account is extracted, describes various methods which were tried to abate the severity of this disease. Among the rest, upwards of four hundred were salivated, every one of whom died. Bleeding, and the whole tribe of antiscorbutic medicines, were then administered with no better success, nor did the volatile or fixed salts produce any favourable effect. In the situation of those troops, neither the juices of fresh green plants, or of lemons, oranges, or other acid fruits, could be procured; nor a sufficient quantity of milk, to provide whey for the numerous sick, a drink which has been highly extolled for the cure of this disorder. The Peruvian bark, which this author had some time before given with advantage, proved ineffectual, on account of the impossibility of procuring proper food to accompany this medicine; and mustard-feed, which is said to have saved the besieged garrison of Rochelle when they were over-run with this disease, failed to produce any favourable change, and the baths of the country were resorted to with as little appearance of restoration.

This author also seems to be of opinion, that fresh vegetable juices and acid fruits, if they could have been procured, would have been the only effectual remedies.

Another species of this disease has also been mentioned, which has been denominated the *hot scurvy*, from the symptoms which attend it, though it has been generally found to prevail most in cold countries, and among troops which have been exposed to the rigours of inclement seasons.

It seems to be distinguished from the kinds we have already described by various circumstances; among others, the body appears to be rather emaciated than swelled; the gums are neither fungous or foetid, though they are swelled, hard, hot, and so extremely painful and tender, that the smallest touch produces inexpressible anguish; the pains are less fixed than in the other scurvies; the patient's spirits are so affected, that he

is continually complaining, sighing, and lamenting his condition, and he has a constant but irregular fever; the pains fly from limb to limb, and from one part of the body to another, sometimes from the back to the whole head, neck, and teeth, and at other times one side only of those parts is affected; and after the most exquisite torture has been endured in the upper regions, the pain suddenly descends and attacks the breast and stomach, both internally and externally, and occasions extreme oppression of the breath, and stitches in the sides: going still lower, the belly becomes the seat of the disorder, where it occasions wind, colic, pains like those of the stone or gravel, and stoppage of urine; the knees are stiff and contracted, but in general not much swelled or inflamed, and the extremities are subject to twitches and convulsive spasms; no spots appear on the patient's body, and the urine drops a thick, sandy sediment, and is covered with a thin, white, greasy film.

This scurvy prevailed among the Russian troops in the year 1736, who undertook the siege of Asoph early in the spring, and in very piercing cold weather, accompanied with frequent rain, sleet, and sometimes snow; and, as there were no woods in the neighbourhood, the army suffered exceedingly for want of fuel: nor was this disorder confined to those troops which first opened the attack; others, which joined them afterwards, but had made a long and fatiguing march, or had been transported in boats down the river, were alike subject to it's ravages; for the siege having been protracted three months, the summer advanced with such heat as was almost insupportable, especially in serene weather and during the hours of sun-shine; and as this heat was frequently interrupted by days of rain, the alternate warmth and moisture contributed to propagate this disease, which was also considerably heightened by an accidental circumstance, which threw an amazing quantity of unwholesome food in the way of this army; for the overflowing of the river

brought with it such a quantity of fish, that the whole camp lived on it for a great length of time, and having been before short of provision, not only eat immoderately of this supply, but even used it half dressed, and kept it till it was in some degree putrid.

To these causes of scurvy may be added the impurity of the water, which being taken up from such parts of the river as were fordable, and being contiguous to the camp, received the filth and nastiness of it; grew daily worse and worse, and was rendered still more pernicious after the inundation, when it carried back into it's course an additional accumulation of noxious matter.

Nor did the mischief of the overflow cease with the return of the waters; the putrefaction of the astonishing quantities of fish left behind, aided by the intense heat of the days, and cold, damp, and moist nights, produced a most foetid and stinking air in a thick and almost impenetrable fog; and the general discontent which prevailed, owing to the ill success of their endeavours, and the various disappointments they met with, tended to inflame their minds, increase the fever, and aggravate all the symptoms of the disorder.

For this disease, the author of this account prescribed emollient and oily medicines, with antispasmodics and absorbents; but the cure was compleated and the swelling, heat, and pain of the gums removed, by the juice or pulp of acid fruits.

Whoever will compare the sufferings of these soldiers with the situation of Lord Anson's Squadron in it's passage round Cape Horn, will find that many of the causes which produced the scurvy concurred in both cases, and that the difference in some circumstances might naturally occasion a diversity of symptoms.

And from observations of a later date, made by a physician whose great abilities and minute attention were successfully employed in the investigation of the causes, nature, and symptoms of this disease, and

whose situation enabled him to execute this task with peculiar accuracy, it appears, that bad provisions, and bad water or beer, having by degrees tainted the juices of the body, and produced such acrimony in the blood as disposes it daily more and more to a state of putrefaction, and these effects being greatly augmented by living constantly in a moist salt atmosphere, and breathing foul polluted air, the most effectual method of correcting this alcalescent acrimony of the blood, and preventing the farther advances of putrefaction in the humours, is by vegetable and mineral acids, the former of which are much the safest, and may be given in draughts, the others by drops only.

From repeated instances, it appeared to this ingenious observer, that however the crews of a ship or fleet were reduced by this disease, or with whatever degree of violence and obstinacy they appeared to be affected by it, yet on their arrival in a port, fresh provisions, wholesome liquors, fresh air, and, above all, proper fruits and herbs, soon purified the juices of the sick, and restored them to health and strength; a circumstance so very observable in the ships employed in the East India service, that if they happened to miss touching in their passages at the Island of St. Helena or the Cape of Good Hope, where they were plentifully supplied with the above necessities, the effect was constantly the prevalence of this disease, which seldom attacked them if they had an opportunity of refreshing at these places.

That the state of the blood in the common sea scurvy approaches to putrefaction, is apparent from the stinking breath of the sick, their corroded and rotten gums, high-coloured foetid urine, foul ulcers, black, blue, and brown spots, and eruptions on the skin, frequently feverish heats, discoloured tongues, and bilious and bloody dysenteries, which always attend it in a greater or less degree; that violent scorbutic cases of this kind have often been surprizingly relieved

lieved by apples, oranges, and lemons alone; and that the officers, who are provided with wine, cyder, and the fruits last mentioned, are infinitely less affected with the scurvy than the poor common sailors, who are without such provisions.

Hence this judicious writer is led to infer, that what will cure will prevent; and that if, therefore, a proper regimen can be used at sea, it will prove a kind of continual antidote to the rank putrescent qualities of the common ship's provisions, and correct, or at least very much lessen, the ill effects of them; for which purpose he recommends the following.

That all ships which are to proceed on long cruizes or voyages should be supplied with a sufficient quantity of generous cyder, the rougher, provided it is perfectly sound, the better; for if apples are found of such service in the scurvy, surely the juice of them, when it is become a vinous liquor, cannot but be highly salutary, and be well adapted as a common drink, to correct by it's acidity the alcalescent putrifying quality of bad provisions: this cyder should be at least three months old, and be once racked off from the lees into sweet vessels, which will contribute to it's becoming fine, and prevent it from growing ropy, in which state it is useless; should any part of it turn to vinegar, which may sometimes happen, it will even then be highly serviceable, both as an antiscorbutic and in purifying the ship from disagreeable smells; but if cyder is well managed, it may be carried to the East Indies without losing it's flavour or body.

Of this cyder every seaman should have a pint a day, besides his water and beer, if the latter remains good; a quantity of vinegar should also be daily distributed, to be used with their victuals, and in particular when the salt meats grow rancid; the decks should be frequently washed or sprinkled with this acid, or the fumes of it, heated, should be conveyed to every part of the

ship, and the air should be changed frequently by means of ventilators.

When ships proceed on their voyages or cruizes in the autumnal season of the year, a quantity of apples might also be carried, which being well chosen, and packed in dry tight casks, would keep good for two or three months at least; even lemons and oranges, wrapt in flannel, or any thing else that will imbibe their exhaling moisture, kept in dry vessels, and tolerably cool places, might be preserved a long while; or if this should be attended with difficulty, the juices of these fruits boiled to syrup, or made into shrub with rum or brandy, would prove more wholesome than the fiery poisonous spirits commonly served out in the navy, the fatal effects of which have been already noticed. In case of stinking water, juice of lemon, elixir of vitriol, or vinegar, should be always mixed with it, which will deprive it of great part of it's pernicious quality; and the ancients, particularly the Romans, were so well acquainted with this last mentioned acid as a preservative, that they always carried a quantity of it in their fleets and armies.

And as it appears, upon comparing all the circumstances, that the same causes producing the same effects, this disease may prevail as much on the land as at sea, where the soldiery are exposed to the same hardships, suffer the same inconveniencies, and are confined to the same kinds of provisions, as those who are employed in the sea-service, and that there is but one certain method of prevention or cure; it becomes an object of great importance to ascertain the means by which vegetables and vegetable acids can be best and most easily procured, kept, and conveyed, both in the navy and among our armies and garrisons, as the life of every individual who is engaged in the service of his country is too precious to be lost by neglect or inattention, and of too high estimation to be sacrificed to an inconsiderable addition of trouble or expence.

C H A P. II.

Of the Bilious or Yellow Fever of the West India Islands.

THE following symptoms distinguish this fever from all others. The patient is attacked by a sudden chilliness, which is however of short continuance, and is attended or succeeded by faintness, giddiness, throbbing pains in the head and loins, glowings and flushes in the face, redness and scalding in the eyes, sickness, nausea, and disposition to vomitings of bile, in some instances green, but generally yellowish and extremely bitter; a soreness and violent oppression of the breast, a sensation of tightness over the chest, like that which might be produced by tying a cord over it, a difficulty and pain in breathing, restlessness, weariness, anxiety, and depression of spirits.

At the first seizure the pulse is full, strong, and quick, but after forty-eight hours, more or less according to circumstances, it sometimes becomes so regular and calm as hardly to be distinguished from the pulse of a person in perfect health, and thus it continues in some cases for a day, or even some hours together; the blood which is drawn appears of a lively colour, but the *crassamentum*, or solid part of it, is of a more loose and flabby texture than ordinary; the skin is sometimes dry, or if at all moist, is only partially so about the face, neck, and pit of the stomach, and this appearance of sweat is probably produced by the patient's sickness and straining in attempts to vomit.

When the indisposition has proceeded from forty to forty-eight hours, the eyes grow yellow, and soon after the whole surface of the skin takes the same tinge, the change beginning at the neck, and spreading upward and downward.

Towards the end of the third, or early on

the fourth day after the first seizure, the texture of the blood becomes so dissolved and broken down, as to make a passage through the most minute vessels, and bursts from the nose, mouth, eyes, ears, fundament, and through the skin where any blisters have been lately applied; at this state of the disorder the pulse undergoes another change, fluttering, sinking, and sometimes intermitting, and the patient grows heavy, drowsy, and at intervals delirious; to these symptoms succeed startings, twitchings, and universal tremblings; what is discharged by vomiting now loses the yellow colour, and turns brown or dirty like puddle water, and a sediment resembling coffee-grounds settles at the bottom after it has been suffered to stand a short time; clots of coagulated blood, almost black, are vomited up, or thrown out suddenly, without any particular sickness or immediate retching, and blood of the same appearance is voided both in stool and with the urine: and these are symptoms of speedy mortality, as well as livid spots, which sometimes appear a few hours before death on the breast and stomach, at first sparingly, but soon increasing in number, and extending to the back and sides.

But though all these are symptoms of this disorder, yet they do not always occur in the same person: in some the attack is not attended by any chilliness, and others are neither affected by faintness, giddiness, glows, or flushes in the face; in some cases the yellowness of the eyes and skin is not observable, but the sleepiness and hæmorrhages succeed immediately after, the ardent stage of the fever; however, the favourable crisis generally occurs before the change

change of the skin is expected, or takes place during the continuance of that symptom.

Yet the yellowness of the skin is so frequent in this disease, that it may almost be considered as one of the inseparable characteristics of it; to which may be added the sickness, nausea, and incessant discharges of bilious matter by vomit, the oppression on the breast, the difficulty of breathing, the fresh colour of the blood, and the softness of the crassamentum; these are such certain signs of this distemper, that when they appear, no doubt remains as to the nature of the indisposition; but if any of these symptoms are absent, no precise judgment can be formed.

Nor do the several changes of appearance, or the approach of the symptoms, keep exact time in all cases; in some the periods are earlier, in others later: those we have mentioned may be considered as a medium, and will in general be found as correct as different circumstances and constitutions will admit.

The progress of the bilious fever hath in some instances been so rapid, that the greatest part of these symptoms have been gone through, and the course ended with the life of the patient in twenty-four hours: but this is a very unusual case; five, six, seven, or eight days, is the common duration of it, and it is seldom or ever protracted beyond nine or ten.

This disorder generally attacks those who are newly arrived in these islands, and in particular visits those who indulge in any excess: drinking, or keeping late hours, and exposure to the dews of the night, seldom fail to bring it on; but though it is commonly called a *seasoning*, and those who have once passed through it are apt to flatter themselves that they are exempted from it's returns, yet this is by no means to be depended on, any more than another general idea, that after a few months residence there is no great reason to fear it's attacks.

The principal objects in the cure of this

fever are, to correct the too great tendency of the blood to putrefaction, and to dislodge the putrid bile as speedily and safely as the case will admit.

On the first or second day, where the patient is of a strong constitution, and a full or sanguine habit, it will in general be proper to take away a small quantity of blood; from seven ounces to ten will in general be sufficient, but this evacuation cannot be repeated without the risque of sinking the patient too low, and after the third day the operation of bleeding is in no case to be admitted.

After the bleeding the following clyster may be administered.

Take of common decoction, eight ounces—of lenitive electuary, one ounce. Dissolve the electuary in the decoction, and add two ounces of sweet oil and a spoonful or two of brown sugar.

The sick are generally costive in the first approach of this disorder, which tending so quickly to putrefaction, it becomes highly necessary to clear the bowels, and it frequently happens that bilious stools follow the return of the clyster, and almost constantly if the vomiting has occurred before it is given.

As this disorder is commonly attended with great thirst, the patient may drink freely of a sherbet made with lime-juice, and sweetened to the palate; this should be taken about the warmth of milk, but as the intense heat of the fever sometimes induces the patient to request it cold, it will be more adviseable to let him have it in this state, than that he should omit taking it, as it operates both as a powerful antiputrescent and anti-emetic.

On the first using this beverage, it is commonly thrown up as fast as water after an emetic; but when the patient can be prevailed upon to persist in drinking it, his sick and vomiting fits will grow less severe,

and after the rejection of the first three or four draughts, each succeeding one will remain longer on the stomach than the last, till the intervals between the vomitings are of so considerable a duration, that gentle purging medicines may be administered; for which purpose the following is directed.

Take of the purest manna, two ounces—of vitriolated tartar, ten grains. Dissolve these in six ounces of whey made with Madeira wine, and add one ounce of the pulp of preserved tamarinds. Strain this mixture, and throw into it half an ounce of the tincture of fenna: divide the whole into four equal parts, and give one every hour until a loose stool is procured.

Or, dissolve one ounce of manna, and half an ounce of cream of tartar, in one pint and half of the sherbet or lemonade, lessening the proportions of acid and sugar in making it. Of this mixture a small tea-cupful may be taken, and repeated as often as the stomach will bear it without exciting vomiting, till the body is sufficiently open, continuing the use of the medicine at such intervals as may keep it in that state.

Besides the sherbet, the sick may be indulged in the moderate use of those cooling, subacid, and antiputrescent fruits, with which this climate abounds; such as oranges, pine-apples, allegator pears, and shaddocks; which, if not taken in immoderate quantities, are so far from being hurtful, that they are in general highly beneficial.

But as the appetites of the sick require to be courted with perpetual variety, so even this sherbet, pleasant as it is, will soon become loathsome, and may likewise disagree with some stomachs: it may, in either of these cases, be changed for thin gruel, barley-water, or emulsions of the cold seeds or almonds; or a drink may be made by pouring boiling water on pieces of the cassida bread roasted, and letting it stand till it is nearly cold; or, if this bread

cannot be got, sea-biscuits may be substituted, which should be well toasted without being burned, and broke in pieces before the water is poured on them. Where it can be had in sufficient quantity, the liquor of the cocoa-nut is an admirable drink, being a pleasant, cooling, natural emulsion or whey. Of this milk, as it is called, each nut contains from half a pint to a quart.

In some cases, after the first class of symptoms has proceeded a day or two, and the patient perseveres in drinking freely of the lemonade warm, though he may have been indulged with a draught of it cold now and then, a sweat breaks out, which frees him from the farther progress of the disease, and removes all apprehensions of danger; for when the sweat is copious the vomiting is seldom of long continuance, and on the ceasing of this symptom, the pains of the breast and difficulty of breathing are soon relieved; sometimes even before the skin turns yellow, though more frequently during the time this appearance continues: and this favourable crisis in some cases occurs, even in the last stage, provided the perspiration comes on before the spots and black vomits; after these symptoms appear, few hopes can be entertained, though instances have been known of patients being saved by sweats when they have been in extremity.

After the external bleedings already mentioned some patients have recovered; though when the blood arises from the gums, nose, or eyes, when it is discharged with the urine, or passes insensibly from the fundamen-
t, there is a very considerable degree of danger; and when the vomitings are black, or of a coffee-colour, a mortification has in all probability already taken place.

The manna and cream of tartar may be occasionally continued through the course of the disease; or, if it appears necessary to increase the frequency of the bilious stools,

stools, a tincture of rhubarb may be given instead of it; and this may be prepared with weak cinnamon water, to render it grateful to the stomach and agreeable to the taste, and may be given occasionally, as the stomach will bear it, in the same manner as the other medicine.

If this fails of success, the clyster may be administered if possible, which is not always the case, the heat and acrimony of the bilious stools sometimes occasioning such tenderness in the extremity of the *rectum* as to produce extreme agony on any attempt to introduce a pipe, however small and smooth.

When any moisture on the skin, or tendency to perspiration, is discoverable, it will be right to discontinue the opening medicines, and give from half an ounce to an ounce of Mindenerus's spirit, which dose should be repeated at the end of five or six hours, if the sweat continues so long; and sage tea, acidulated or not, as the patient chuses, should be given frequently to encourage this disposition. Attempts to procure sweats by medicines are generally unsuccessful; those which occur are for the most part spontaneous, and nature should be gently solicited, but not forced to continue them.

Blisters on the thighs are often of considerable use to check the vomiting and relieve the oppression of the breast and painful breathing; and the season for applying them is about twelve hours after the commencement of the yellow stage, which, as we have already observed, generally happens about the close of the second day, or beginning of the third, after the seizure. These blisters, raising an artificial inflammation in one part, cause an abatement of the natural ones in another, and are more apt to produce this effect when placed on the lower limbs, than on the arms, back, shoulders, or other superior parts of the body.

As these blisters grow troublesome the

vomitings commonly begin to abate, and the increased irritation and inflammation of them generally carry off this symptom entirely; nor should we be intimidated from applying them in this disease, because, from their being apt to occasion greater degrees of inflammation in the thighs than in other parts, danger may be apprehended that they may bring on gangrenes: this is a circumstance which never happens unless there is a previous general tendency to mortification in the habit; and though, when this is the case, the blistered parts may mortify first, yet this is by no means a proof that the blisters occasioned the mortification; on the contrary, it is pretty certain that they never of themselves produce any such effect, and that the pain and intense inflammation round their edges are generally favourable symptoms, and foretel the departure of those which are equally disagreeable and much more dangerous. Nay, in some instances, where the vomiting is extremely severe, and the intervals between the fits so short that no medicines taken internally will stay long enough on the stomach to operate with advantage, the cure must depend entirely on blisters and clysters; but it should be observed, that the former ought always to be applied long before that stage of the disorder in which the texture of the blood is broken down and dissolved, that they may produce their effects in the prevention of this alarming state of the disease.

The approach of the yellow stage may be considered as the criterion of danger: if the symptoms are violent, this appearance comes on early, and denotes a severe illness; if, on the contrary, it does not come forward till the fifth day, the disease may be expected to be more mild, and hopes may be entertained that it will end favourably; but when it happens in the first or second day, no time should be lost in applying the blisters; and when the first stage is protracted without the change of the skin, which,

which, as we have observed before, never takes place at all in certain instances, it will be right to blister at nearly the same distance of time from the first attack that this change would have taken place fully, which will be about twelve hours before the third stage is expected to commence.

Towards the close of this fever scabby eruptions frequently break out about the mouth and nose, and in some cases boils of different sizes, but scarce any of them exceeding that of a hazel-nut, rise in the breast, neck, shoulders, and about the hips; either of these appearances prove critical, though these little tumors seldom suppurate, but turn black and seem to mortify at the top like common carbuncles, and these parts slough off and leave little ulcers, which digest and heal very speedily. These favourable eruptions generally happen in cases where the symptoms have been rather tedious than acute, so that the disorder hath existed till the ninth or tenth day, and the boils are very apt to appear, and rather of a larger size near the seats of the blisters, where however they never produce any sort of ill effect, except indeed the blisters should be imprudently placed on parts where the bones are but thinly covered with flesh, in which case there may be some apprehension of the bones being affected, as in warm climates they very frequently become carious if by any accident they are laid bare; and this may serve as a caution against placing blisters on any other than fleshy parts of the lower extremities, such as the thighs or the calves of the legs.

A crisis of another kind sometimes though not often occurs, to the preservation of the patient's life, and this is a small florid eruption, appearing in one or more clusters on or very near the pit of the stomach; these clusters are composed of spots or pustules not larger than measles, and from three to eight in a cluster: this appearance may always be relied on as a certain sign of the patient's safety.

But, in whatever state of this disorder relief arrives, and whether it is procured by the evacuation of bilious stools, by perspiration, by boils or eruptions, or by the application of blisters, as soon as the vomiting ceases, and it is apparent, from the abatement of the oppression on the breast and of the difficulty of the breathing, that the fever begins to decline, the bark should be administered; but though it will, under these circumstances, be of essential service, it might be attended with disagreeable consequences if it was offered sooner.

This medicine may be given with advantage in either of the following forms.

Take of the bark grossly powdered, half an ounce—of snake-root, one dram and half. Infuse these six days in a pint of Port wine; pour it off fine, and give three or four spoonfuls every four hours, or oftener if the patient's stomach will bear it.

Or, take half an ounce of the bark, powdered as before—of snake root, two drams. Boil them fifteen minutes in one pint and half of water; strain it off, and add to the decoction one ounce of strong mint water, and half a tea-spoonful of spirit of lavender. Administer as the last.

On the departure of this fever, it leaves the patient extremely weak, but this may, at least in some measure, be avoided by great care and attention in the sickness: during the vomiting state, which generally lasts two days, little can be done towards supporting the patient; a spoonful or two of Port or Madeira wine, sweetened with sugar, and diluted with about one third part of warm water, may be given now and then, over and above the common drink; and as soon as the intervals between the vomitings are lengthened, it will be proper to endeavour at fixing a little soft, mild, and nourishing food, on the stomach, such as sago, salop, rice gruel, or panada, adding to each a small quantity of generous wine; and this kind of food should be continued for some days after the crisis, and from

from this time good teas and broths, made with young animal flesh, will contribute to the recovery of strength.

The attacks of this fever are generally made after violent exercise, excessive drinking, or exposure to night air, and particularly sleeping in it; though those who are most regular, and use the utmost precautions, are by no means secure against them.

Those whose habits are full, and their constitutions robust, are not only more liable to this disorder, but pass through it with much greater difficulty than persons of thin and spare habits and relaxed fibres.

Native white men of the islands are seldom affected with this disorder, except after debauches or violent exercise; yet going to Europe and returning, they are as subject to it as Europeans. Women, who are natives of these islands, are never seized with it; an exemption for which they are probably indebted to their extreme temperance, and to their being free from all those employments which require exposure to the sun or air, all out-door occupations being performed by negro slaves, none of whom, of either sex, natives or foreigners, are ever known to be attacked by it.

Women from Europe sometimes suffer in this disease, though not so commonly as the men, who frequently have it as often as they return to Europe, and come back to the climate of these islands. Youths are seldom liable to it till the approach of manhood.

In the enumeration of preservatives against this disease will be included the best precautions that can be offered against most of the diseases of these climates, and being thrown together in this Chapter, the necessity of repeating them under the head of every particular distemper will be avoided.

The first and chief preventive article is temperance, both with regard to food and liquors; and this is more particularly to be attended to on the first arrival from Europe,

but must by no means be disregarded during a residence in those islands, by persons who are disposed to sacrifice some indulgences to the preservation of health.

In all countries a due mixture of animal and vegetable food is requisite, but in these warmer climates the balance should be in favour of vegetables; with those, fresh meats of all the usual kinds, together with fowls and fish, may constitute a wholesome diet; added to which, the pleasant and mild subacid and acid fruits with which these islands generally abound, and the aromatics which Providence has so plentifully provided, being used with moderation, will contribute to preserve the solids from relaxation, and the fluids from putrefaction.

The moderate use of wine is not only allowable, but necessary, in these climates, as well as a more liberal indulgence in subacid cooling liquors; a few glasses of good Madeira, or other generous wine, is necessary to health, and the best common drink is weak wine and water, or very small punch, made with well-ripened fruit and rum of a proper age. Since these regulations have been attended to, and the islands being better peopled and more cultivated are cleared in a great measure of the woods, the new comers are much less subject to *yellow and bilious intermitting fevers*, and *the dry belly-ache and dropsies*, than when the use of new rum prevailed generally, and people of all ranks indulged in excess and debauchery; the air, too, being rendered noxious for want of a free passage for the winds, and few vegetables being produced to correct the animal food.

The only proper time for exercise is in the morning, when the air is cool and refreshing; those, therefore, who desire to live long and enjoy health, must keep good hours and rise early. It has been remarked in some of the West India islands, that none have ever arrived at old age who have been addicted to lying late in bed.

The exercise must be proportioned to habit of body, constitution, and other circumstances. It may serve as a general rule, that it is salutary, as long as it does not produce disagreeable fatigue; and it is certain, that the best established health will decline from the neglect of it: in these climates, however, it should be taken before or about sun-rising, and be avoided in the heat of the sun.

Bathing, practised with due caution, will undoubtedly contribute considerably to the preservation of health in these warm climates; but the most proper time for this purpose is either early in the morning before sun-rising, or in the middle of the day, when the water is sufficiently warmed; it is extremely dangerous to plunge at any time of the day into water, which having been shaded is perfectly cold, and it is peculiarly so when the body is heated by exercise.

Cleanliness of all kinds is essential to health; about the person it is necessary to prevent the obstruction of perspiration, and about houses and habitations it is indispensable, in countries where every perishable substance hath such a tendency to sudden putrefaction.

Great regard is due to cloathing in these warm climates; men are apt to expose themselves with no other covering than their linen to those sharp breezes which frequently come on in the hottest weather, and this too when they are heated with wine, or in a profuse sweat from exercise; such acts of imprudence are generally attended with very fatal consequences. It would be right for the inhabitants of these islands, and especially those who are removed to them from Europe, to accustom themselves to wear a loose gown or other upper gar-

ment, which might be less restraint to them in their ordinary occupations than tight cloathing, and yet be always ready to wrap round them in the intervals of rest, or on the approach of those breezes. It has also been warmly recommended to those who reside in the West India islands, to wear a piece of flannel over the breast and pit of the stomach, by way of what the French call *prudence*: this would particularly protect such as are obliged to expose themselves to the noxious air of the night, or who are not cautious enough to cover themselves warmly in their beds during this season. Sleeping abroad by day or night, or lying down on the grass, and particularly in moist places, or such as are sheltered by woods, are such desperate follies, that we apprehend admonitions against them are unnecessary.

It is equally dangerous to keep the same cloaths on after they have been wetted with rain, or moistened by perspiration; in both cases they should immediately be changed, care being taken that those which are to supply their places are perfectly dry and rather warm.

And, as an accompaniment to all the other precautions, it is absolutely necessary to support the spirits; the dread of those disorders, to which new comers are always told they are peculiarly liable, hath in many instances been productive of them, and apprehension of danger is frequently the occasion of it. Under the salutary regulations which we have collected, most of these diseases may in general be avoided; but should they occur, they are by no means so fatal as hath been too often represented: the proper method of treatment is well known, and experience hath shewn us that danger may be in most cases obviated.

C H A P. III.

Of the Intermitting and Remitting Fevers of the West Indies.

BOTH these disorders begin with shiverings or chilliness, succeeded by the symptoms which usually denote the approach of an ardent inflammatory fever: in the *intermittent*, of which we now speak, bilious vomitings for four or five hours, and a pretty high delirium, are frequently added to them; in these cases it is necessary to bleed, and the blood after standing will be found to be fizy, and the surface covered with a buffy skin. If the paroxysm continues any considerable time, it will be right to empty the bowels by a clyster; to recommend some emollient drink, acidulated with the juices of fruits, to be taken freely; and in some cases to order a blister to be applied between the shoulders. These fits are generally followed by intermissions, in which the patient is free from all the symptoms, and in particular his faculties are perfectly restored; but these intervals are seldom of longer continuance than five or six hours; and though the succeeding paroxysms are not in general so intense as the first, yet they are for the most part of greater duration, and are sometimes apt to degenerate into a constant fever for three or four days, in which state of the disorder the patient is always in considerable danger.

The departure of the delirium is generally followed by a moisture on the skin, though not a sufficient perspiration to carry off the heat or lower the pulse; yet at this time the bark may be administered with safety and success, and advantage must be taken of the intermission, to give a sufficient quantity of this medicine to lessen the violence of the succeeding paroxysm: it may be given in substance to the amount of a scruple and half or two scruples, in a dose made into the form of an electuary with

common syrup, and repeated so often as to get down from an ounce to ten drams in an interval of six hours; in this form the stomach will generally retain it, but if it should be once rejected, the attempt should be made again in half an hour, when it will very probably succeed; the bark may be washed down with a draught of lemonade, which being equally agreeable and refreshing, will contribute in no small degree to the retention of the medicine, and all means should be tried to get down a sufficient quantity of it in the intermission, as without it the second fit is frequently of such duration as to prove fatal.

Nor must the administration of the bark be omitted, even when it has answered the purpose of checking the progress of the disease and carrying off the fever: this disorder sometimes returns at the distance of three weeks, a month, or even five or six weeks; it will therefore be prudent to continue the doses of the bark twice or thrice a day for two or three months after the illness, which is rather more effectual than omitting it for a time, and then giving larger quantities every ten days or fortnight periodically, which is sometimes the practice, continuing the use of it this way for three or four months.

The *remitting fever* is never attended with the same violence of symptoms as the *intermittent*; but the paroxysms are of longer duration, and the remissions of shorter continuance: in this disorder a delirium seldom occurs, though the patients seem confused at being asked any questions, but soon recollect themselves, and answer clearly and sensibly; in their sleep they are much disturbed, and exhibit signs of great uneasiness, tumbling and tossing about,

about, and talking aloud: they are seldom troubled with the bilious vomitings, though they have an almost constant sickness at the stomach, on which their food and drinks are kept with difficulty, and the pulse is smaller than in the intermitting fever, and rather more quick and hard.

The operation of bleeding is not only proper in most cases of this disorder, but will in many bear repeating, but the quantity taken off at a time should be small; after the first bleeding, it will be right to give from eight to fifteen grains of ipecacuanha, and from one grain to two of emetic tartar, in proportion to habit and constitution, which not only empties the patient's stomach, but frequently his bowels, by procuring a stool or two. After the operation of the emetic, the patient should be put to bed, and any tendency to perspiration which may appear, should be promoted by giving from six drams to an ounce of Mindinerus's spirit, and frequent draughts of sage tea, or vinegar whey; and if by these means a copious sweat can be induced, the interval may turn out to be a perfect intermission instead of a remission.

In the latter case, however, and when these remissions are imperfect or short, and the fever continues without abatement, the bleeding may be repeated once or twice, according to circumstances, some gentle laxative medicine may be given to keep the body open, and blisters applied to the arms and neck, but the precise time for laying on the blisters must depend on the immediate exigency.

As the symptoms of this fever are not so violent as those of the intermittent, and the danger of consequence not so alarming, so the necessity for administering the bark early is not so urgent, but it must be given freely at a proper time; that is, as soon as the fever clearly remits; and must be repeated frequently according to the symptoms: in these cases a decoction of this medicine with

snake-root is adviseable, and the neutral salts may now and then be taken with some advantage.

But this disorder, as well as the former, is apt to return, notwithstanding every preventive caution that can be used, and these returns do not admit of bleeding so universally as the first attacks, though a necessity for it sometimes appears; blisters are almost always required in these relapses, as the relaxation of the solids increases with every fresh seizure, and the circulation becoming more languid, stands in need of such a stimulative.

The cold bath may accompany the bark, when the remissions are brought to regular intermissions, provided the patient's bowels and other intestines are free from indisposition; the food should also be light and nourishing, and the spoon-meats should always have a mixture of good Madeira wine.

The remissions and intermissions in both these fevers are irregular and uncertain, sometimes occurring once a day, and sometimes oftener; and in a few instances they assume the appearance of tertian agues, the fit only returning the third day, though the patients in these cases generally grow worse at the approach of night.

But when either of these fevers is of long continuance, and the frequent returns of the paroxysm have weakened the patient considerably, other disorders are apt to follow the general relaxation and debilitation of the habit; and dysenteries, wasting diarrhoeas, jaundice, dropsy, scirrhus livers, hectic fevers, and consumptions, seized with fatal effect constitutions brought too low by the preceding disease to withstand the force of such attacks.

If any suspicion arises from the slow progress of the patient's recovery, that such consequences may be apprehended, it will be right that he should immediately change the air; and as the best situations are usually taken for the towns in most of the West

India

India islands, and the grounds around them are in general better cleared of wood than the more distant parts, a removal to them from the country will be often attended with good effects; at any rate, a dry situation in an open spot, sheltered only from the land winds, is most favourable to the patient's recovery.

A voyage or cruize at sea is also recommended, both for the removal of these dis-

orders when they prove tedious or obstinate, and for recovery from the extreme weakness and numerous complaints which are frequently left behind them; and it is surprising to see the effect which a trip of a few days will produce, the recovery from these disorders at sea being generally as certain and rapid as from the sea-scurvy upon arriving at the land after a long and severe voyage.

CHAP. IV.

Of the Dry Belly-Ache of the West Indies.

VARIOUS causes have been assigned as productive of this disease, such as the quantity of lead used in the apparatus for making rum and sugar; the quantity of new rum drank by the inferior class of people, among whom this disorder has been supposed to be most prevalent; and the acid juices of limes and lemons, with which these islands abound, and which are very plentifully taken by the inhabitants; but experience and observation have proved that neither of these are to be considered as the real cause of this disorder: the servants who are immediately employed in the boiling and distilling-houses are less subject to it than others; the most debauched and drunken generally escape it, though it frequently attacks women, who are in this country remarkably abstemious; and those who drink much acid in their liquors are seldom or ever affected by it.

To another and very different cause from either of the foregoing is the *dry belly ache* in most instances to be attributed; corrupt bile seems to be the foundation of this disease, and though, from injudicious treatment in long and frequent fits of this indisposition, the bowels may be so disposed to be affected with spasms, that every obstruc-

tion occasioned by cold or irregularity will bring on an attack of this complaint without any particular bilious symptoms, yet it seems to be the general opinion at present, that it's first rise may in almost every case be deduced from the cause which we have just assigned.

And this opinion will appear to be well founded, when we consider that it is frequently not a primary disease, but so often follows fevers as to have produced a notion, which is almost universally received among the inhabitants of these islands, that the Peruvian bark occasions this disorder; which may probably be in some measure true where it has been administered injudiciously, and in particular instances, even in spite of all the precautions which skill or prudence could suggest.

Now, the fevers which attack white people in this country are in almost all cases attended with a greater or less degree of disorder in the first passages; many persons discharge by vomits enormous quantities of bile, and others, though they may not be affected with vomiting, or even in some instances with nausea, yet will appear in the event to be no less burdened with that fluid, which has been proved by administering

so small a dose of purging salts as half an ounce to a grown person, who has in consequence of it had no less than thirty stools in a few hours.

Nor will emetics always operate effectually in removing the offending bile; in those fevers, however copiously it may have been discharged, either by vomit or stool, by natural or forced evacuations, yet the relief will frequently prove only temporary, and from the rapidity of the secretion, the stomach and bowels will soon be again loaded with a quantity equal to that which has been discharged; and though the disorder should actually go off in a compleat natural purging and vomiting, yet even here the recovery is not always permanent; on the contrary, after a few weeks the fever returns again with the same symptoms, and goes off in the same way, and so continues to recur till at last it occasions an habitual and fatal discharge upwards and downward.

And as these fevers are almost universally of the remittent or intermittent kind, and of course require the use of the bark, and are not to be conquered without it, if that medicine should have been imprudently administered before the bile is well cleared from the first passages, the consequence is not unfrequently an attack of this endemial colic or dry belly-ache; and thus the bark may be said to occasion this disease, though the cause is, notwithstanding, the remaining bile.

Not that this disease always happens in this manner: it frequently comes on after fevers in which the bile hath been effectually evacuated, and where no bark hath been given; in some cases it follows fevers which have gone off without any medical help, and in others it occurs without any previous illness.

The symptoms are at first violent pains in the loins, advancing from thence to the region of the belly; constant tremors, and slight twitches, which increase by degrees

to strong convulsive spasms in the bowels; these signs are accompanied by heat, thirst, a foul and discoloured tongue, loss of appetite and strength, dejection of spirits, and disturbed sleep: as the disease gains ground, the convulsions grow more violent, and affect the mouth with contortions; the eyes become fixed, and seem incapable of distinguishing objects; the speech is affected as if with a palsy, the understanding is confused, and a total deprivation of it is not uncommon; epileptic fits come on, with the rattle, occasioned by fruitless endeavours to discharge a quantity of viscid phlegm which gathers to the throat; and the stomach labours to throw up more, which is prevented by spasms, which contract both the orifices, and the patient is speedily suffocated.

When this disease is brought on by colds, it frequently occasions the loss of use of the hands and lower extremities if the patient recovers; and in some instances the faltering of his speech is removed with great difficulty.

Though this disease is denominated the dry belly-ache, from the costiveness which almost universally attends it, yet some instances occur where the patients are moderately lax even at the time they are in extreme pain.

The first attempt is to procure ease by opiates and antispasmodics, and both may be administered with effect in oily clysters; from half a grain to two grains of opium may be given by the mouth every two hours, or more or less frequently, according to circumstances; and this may be made into a bolus, with from six to eight grains of asafoetida, and washed down with a tea-cupful of the musk julep; and a clyster of warm oil, with from forty to sixty drops of liquid laudanum, should be administered once or twice a day, as the violence of the pain may direct.

Oily mixtures, spermaceti emulsions, broths of calves feet and veal, and sago, jellies,

jellies, and other food of the same kind, will be found of use to envelope and dilute the acrid bile; if the disposition to vomit is troublesome, temporary relief may be obtained by a draught or two of camomile tea, which will help to unload the stomach of some of its offensive contents: fomentations, warm baths, bladders of warm water, bags of heated salt, or hot bricks, wrapped in woollen cloths and applied to the belly, may be of service in the extreme paroxysms of pain.

When, by these means the violence of the spasms is allayed, and such an interval of ease procured as can be expected whilst the occasion of the pain remains unexpelled, it will be right to endeavour to procure stools by some such gentle laxative as the following.

Take purging salts, and finest manna, of each an ounce—of oil of almonds, or sweet oil, two ounces. Reduce the whole to an emulsion with the yolk of an egg, and give a table-spoonful, repeating it or increasing the quantity till it takes effect.

The castor oil has been recommended for this purpose, but from the difficulty of procuring it fresh-drawn, it cannot be often used; when it contracts any degree of acrimony from keeping, it is not only nauseous to the taste and offensive to the stomach, but it is apt to gripe and to occasion a constant inclination to go to stool, and such a bearing down, as if the whole contents of the bowels would be discharged at once.

In general, the medicines used to loosen the body should be of the mildest, softest, and most relaxing kinds; yet, in desperate cases, where the pain continues long fixed, where the vomiting is continued, or the returns of it frequent, where the belly is much swelled and stretched, the pain intolerable, and no relief can be obtained by the opiates and antispasmodics, so that there is apparent danger of immediate in-

flammation and succeeding mortification, it may be allowable to try the effect of bleeding, and administering as a more active purge a pill or two, or more according to the effect, with calomel; and this hath been known to succeed in procuring a passage when all other means have proved ineffectual, and with the assistance of a warm bath, and a clyster of warm oil with liquid laudanum, as before directed, immediately after the operation of the calomel, hath procured such ease, that the returns of the disease have never been violent after.

In these climates it is extremely difficult to discover when this disorder, or indeed any other, is attended with internal inflammation, and especially in negroes, as the pulse is by no means to be depended on, which is hardly a sufficient guide in many cases to denote the presence of a fever; nor indeed does a fever always accompany internal inflammations; even fatal peripneumonies and pleurifies sometimes proceed without any degree of fever.

During the use of the purging medicines which have been directed, the opiates and antispasmodics must also be continued, and in nearly the same manner: the quantities and frequency of administration must however be governed by the violence of the pain and other circumstances.

In this species of colic it is usual for the laxative medicines to bring off a vast number of hard pellets like sheep's dung, a discharge which is productive of great relief, and which takes place at different periods of the disease in different patients; it seldom, however, happens with the first stools, which are for the most part liquid, but it almost constantly removes a fixed pain which is previously felt about the middle of the belly; and, from a circumstance which sometimes happens of the patient's positively asserting that he has had no passage at all, though these hardened balls of the fæces have been plentifully evacuated, a doubt has been entertained whether

whether the peristaltic motion, or natural inclination of the intestines to expel their contents, might not affect the great guts below, so as to oblige them to evacuate, without removing any stricture which might take place above.

Nor is the discharge of these globules always critical; from the return of the spasms more are commonly generated, so that it does not appear that the hardening the fæces is the cause of this disorder, but rather the effect of it.

If the cause of the disease is gradually carried downward in the stools procured by the laxative and purging medicines, the use of them, with the opiates and antispasmodics, may be continued till the complaints are entirely removed; but if, upon the relaxation of the spasms in the bowels, and the procuring a passage, bilious matter should be thrown up by vomits, or brought up by a kind of hiccup or involuntary gulping, and the discharge this way should be attended with retching or other difficulty, and should not appear to be sufficiently copious, it may be promoted by a few draughts of camomile tea or other proper wash; and if even this should not fully answer the purpose, from one grain to two of emetic tartar may be given with considerable advantage, as it will tend to the evacuation of the cause of the disease, and consequently to the shortening it's duration; but though these emetics are safe, and in some instances absolutely necessary, where the purging medicines fail to discharge the bilious matter effectually, yet they ought not to be administered till ease hath been procured, and the patient's body is open for a free passage downward.

If the disorder is treated in the way we have directed, and the cause perfectly removed as early as safety will admit, it does not often happen that any great or obstinate degree of costiveness remains behind; on the contrary, it is sometimes necessary to discontinue the use of the oily laxative

emulsion, from an apparent inclination of the bowels to an opposite state: should, however, any such costive disposition occur, or the intestines continue to be in any degree affected with spasms, these complaints may in general be corrected by the use of asafœtida and the other foetid gums, which will also in most cases prevent the paralytic symptoms which we have already described.

This disorder was once so prevailing in these islands, that there were but few of the inhabitants, and scarce any among those who had been before resident in Europe, but what had been subject to it in a greater or less violent degree, and it was somewhat extraordinary to meet with a person totally free from the paralytic symptoms which usually followed it: at present it is much less frequent in it's visitations, and the effects of it are seldom so fatal; a change which may in some measure be attributed to the more temperate manner of living, which has of late years been adopted, but may also be partly, if not principally owing to the attention, which from experience has been found absolutely necessary to be paid to cloathing by day and warmth by night. The pernicious custom which formerly prevailed of throwing off the coat or other upper garment the moment a man entered his house, though he was then most probably in a profuse sweat, and exposing his body in that state, covered only with his shirt, to the coolest air he could find, has long since been happily abolished: and, among the prudent, the still more dangerous practice of tempting disease in the cold air of the night in the same unclothed condition, after being heated all day with violent exercise, or inflamed with large draughts of Madeira wine. In the days of which we are speaking, the impatience of heat used to induce many persons to sleep under the cover of a thin sheet only, though the night frequently become intensely cold of a sudden, and though the texture of the body is so rarified by

by the almost uninterrupted sunshine of this climate, that it is much more sensible of cold than where it is exposed to a greater degree of it, but is prepared for it by the gradual and accustomed vicissitudes of the seasons.

The accommodation of the dress, not only to the weather but to the situation of the wearer, is now become a regular establishment; instead of casting off the coat, waistcoats of woollen cloth or stuff are added, and the doctrine which had been long inculcated even by physicians, that a thin dress is necessary to health in warm climates, hath been with very great justice exploded; for, if it be considered that perhaps far the greater number of diseases are prevented by the admirable disposition which Nature has provided in the animal system for carrying off by perspiration whatever is either noxious or useless to the body, and how important the discharge through the skin is for this purpose, no doubt will remain but that the mode of covering the human frame, which is most likely to promote this necessary evacuation, or at least to prevent it's being obstructed, is the most salutary.

Not that it is adviseable to load on a quantity of thick and hot cloathing, which might bring on such a degree of perspiration as would tend more to waste and debilitate than to establish health; an altera-

tion in the form of the outer garment would perhaps render any addition to it unnecessary; and if instead of a tight frock, a large gown or coat was substituted, it might answer the double purpose of admitting air when it was suffered to hang loose, and (as we have already suggested) of being wrapped round the body in case a cool or sharp breeze should come on suddenly.

We are aware, that in objection to an opinion, that imprudent exposures to cold air and sudden changes are the causes of this and many other disorders in these climates, it may be urged that the negroes, who are more peculiarly liable to endure unsheltered the vicissitudes of heat and cold, are less troubled than the whites with bilious disorders, and scarce ever with the dry belly-ache: yet they are much more frequently attacked with other disorders which are occasioned by colds, and particularly those of the stomach and bowels; and their exemption from symptoms of the bilious kind may possibly proceed from their using so small a quantity of animal food as to be hardly sufficient to aid the digestion of the vegetable part of their diet, but more probably from their constitutions being rendered hardy and robust by a life of constant labour and exercise.

CHAP. V.

Of the Small-Pox in the West Indies.

WE have already, in a former part of this work, treated very fully of the *small-pox*, both in the natural state and under inoculation, and of the management of every state and stage of this disease in the islands of Great Britain; but it hath been proved by experience, that the same mode of treatment, which hath been prac-

tised with unquestioned and almost uninterrupted success in Europe, is not in all respects adapted to these warmer climates, and that very ingenious treatises, which have pointed out an unerring line of conduct in the country where they were written, have produced some inconveniencies by being closely and indiscriminately followed in a very

different climate: it may be very necessary to offer to such of our readers as may have occasion to visit any part of the West Indies, the method of treating the small-pox in both ways, which hath been most successful in this part of the world.

The mercurial and purging preparatory medicines recommended by the first practitioners of inoculation in Europe, have been found to answer perfectly as to quality in these islands; but mercury having in these climates a great propensity to salivate, and especially among the negro slaves, who having for the most part been accustomed to take mercurials for venereal complaints, their fluids are so impregnated with them, that a very small addition will bring on a spitting with such violence, that caution is required to prevent instantaneous suffocation, it is therefore necessary in all cases, but more particularly in those of negroes, to lessen the quantity of the mercury, and the frequency of administering it by way of preparation for inoculation: nor can the people last mentioned bear strong or repeated purgings; copious evacuations of this sort are apt to occasion dropsies.

Among the slaves, unless some particular cause demands it, preparation of any kind seems unnecessary; should it however be required, two doses of mercurials, and as many of purging medicines, will in almost all cases be sufficient, and between these doses an interval of three or four days should be allowed; the second doses of each may be administered the evening and morning previous to the communication of the infection, or the night and morning following, which ever shall be found most convenient.

The principal difference which arises from the use or omission of preparation is, that in the former case the disease is so extremely mild, that the greater part of those who are not called to labour in the fields, have either no pustules, or if any do appear, they never arrive at maturity, or

only just about the incisions; and that those who are not prepared at all, have a few pustules scattered about the body, but in so favourable a way, and the progress through the several stages is so mild and regular, that the eruption serves only to prevent disputes whether the patient has really passed the distemper or not.

In cases where a woman who gives suck is to be inoculated with a child at her breast, it is adviseable to prepare; and in this circumstance, in the interval between the mother's two doses of preparatory medicines, from one grain and half to three grains, according to age, of the mercurial powder, may be given to the infant at night, with a gentle laxative the next morning: but if the child only is to be inoculated, the mother should take one mercurial dose and purge; two or three days after which the medicines last mentioned should be given to the child, who may be infected immediately; and on the evening of the third day after the operation, the mother may take her second mercurial dose, and the purge on the succeeding morning.

It may also be observed, that notwithstanding the effect which mercury has on grown people, yet it very seldom affects the salivary glands of children, or youth who are not yet arrived at puberty, or are but just past it; and so much better can children bear a large proportion of that medicine, according to the difference of age, than adults, that from one grain to one grain and half of calomel may be given to a sucking infant with the utmost safety.

It is by no means uncommon to inoculate pregnant women slaves; indeed, it is in some cases absolutely necessary to their preservation, where the small-pox is epidemic, or the slaves with whom such women are obliged to hold communication are in a course of inoculation: in these cases the mercurials and purges should be given with a very sparing hand, and especially if the patients are considerably advanced in that state;

state; and the most safe method of preparing such subjects, is to divide the two doses of each kind into three, increasing the number of them, but proportionably lessening the quantity.

In the mercurials to be administered after the infection hath been communicated, the same precautions must be observed with respect to quantity; and these medicines should be given in the evening of the third day after the incisions, unless the patient's mouth is affected by the preparatory doses, in which case the repetition at this time must be omitted.

During the whole process, the food allowed to slaves is generally the roots and vegetables which constitute their usual diet, such as yams, cocos, plantains, potatoes, and bananas, and their drink water, or a beverage made by the mixture of sugar with it, and in some cases the juice of limes or lemons: all possible care should be taken to prevent their getting at rum, salted fish, flesh, and those spices or aromatics which are naturally produced in these islands; but if the mercury should affect the salivary glands or gums, or they are indisposed about the time of eruption, they should be supplied with rice and flour.

On the fourth day from communicating the infection, it may be right to make an infusion of fenna, crystals of tartar, and purging salts, in water, in the following proportions.

Take of fenna leaves, two drams—of crystals of tartar, two drams—of purging salts, half an ounce. Infuse in somewhat more than half a pint of boiling water. Let it stand till it is almost cold, then strain it off, and add to the liquor an equal quantity of rnelasses.

Of this infusion a spoonful or two may be given so often as to procure a stool or two a day, till the appearance of the eruption is compleat; and this same medicine may serve for the laxative potion for children during the preparation.

When the mercury and emetic tartar occasion an efflorescence or erysipelatous rash, which is sometimes the case, these medicines must be omitted; and the patient should be kept as much as possible in the shade in the cool air, and his body should be opened with the laxative medicine: under this management this efflorescence generally disappears in two or three days, and is usually succeeded speedily by a very mild eruption.

Slaves are in general so little affected even by the eruption, as to follow their usual occupations abroad through this and every stage of the disorder; the eruptive symptoms are, however, sometimes so troublesome as to render a respite from labour necessary for two or three days, but they should in such cases be obliged to remain in the air during the day, and to keep themselves constantly moving, drinking draughts of cold water to allay their thirst, and taking the laxative infusion to procure frequent stools. If the fever is more severe, or continues longer than ordinary, a repetition of the mercurial medicine and purge may contribute to remove this symptom and promote the eruption.

If, during the appearance of the feverish symptoms, or before, the patient's mouth should happen to be affected by the mercury, the farther use of that medicine must be omitted; the mouth should be gargled with some emollient decoction: the food should be of the softest kind, such as flour milk, boiled rice, or the like, and the body should be kept open; but even in this case the cold air and water are not prejudicial; and if the disposition to a spitting should increase, it may be checked by a dose or two of the flowers of sulphur; but a salivation, though troublesome and disagreeable to the patient, is seldom of any ill consequence with respect to the disease.

After the eruption is compleated, the patients are in general capable of following their

their business without farther interruption; the only caution necessary being to avoid getting wet either in the feet or cloaths. The same mild and restricted diet should be continued till the pustules are fully dried off; when a dose or two of gentle purging physic may be given, at the distance of three or four days.

Inflammations of the eyes are very common after the small-pox in these climates, in which indeed the negro slaves are peculiarly liable to this complaint, though more particularly after inoculation: in these cases plentiful bleeding and cooling purges are required; which, with a low regimen, nitre in the common drinks, and emollient poultices to the eyes, seldom fail to remove this disorder. After the evacuations, blisters may be applied behind the ears, and continued till the inflammation ceases.

The *impetigo*, or ring-worm, is also apt to succeed the small-pox by inoculation; indeed, there is in general a disposition in the constitution, from the treatment it has received in that disorder, to throw out whatever matter, noxious to health, lurks in the habit: these eruptions, called the ring-worm, will, however, in almost every case yield to the internal administration of sulphur, and the milder mercurial and sulphur ointments.

But the new method of treating the small-pox, hath not succeeded so well in the natural way as under inoculation; in these climates there is an apparent and very wide difference between the effects of mercurials and antimonial purges, administered before or at the time of communicating the infection, and the same medicines given after the poison has spread it's influence through the habit, and shews itself in feverish symptoms: when the patient has been treated in this way, it frequently happens that the fever is totally suppressed by the time the eruption is compleated, the pustules very seldom maturate, but in most cases continue crude, and in many never dry off except in the

face, great quantities of a thin watery humour are discharged from the lower extremities, the patient grows daily more and more weak and low, and at length sinks under the disease.

Among the negroes, when the eruptions are numerous, it is no unusual case for the patient to be seized suddenly, about the time the pustules begin to incrust, with restlessness and a severe fever, accompanied with delirium, and these appearances are sometimes mistaken for the secondary fever, and the case grows desperate for want of proper relief; but when these symptoms occur in this stage of the disorder, it will be proper to examine the patient's feet, when the cuticle or outer skins of the soles will be frequently found to be distended with matter, formed by the suppuration of the pustules under this cuticle, which in these people who go barefoot is as thick as the under leather of a shoe; and this matter not being able to obtain vent, separates the whole skin of the bottoms of the feet, and being confined, irritates the extremely sensible and naked vessels of the skin, and produces the symptoms we have described: this cuticle should be taken entirely off, and fomentations with mild dressings being applied, the feet may be easily healed, and every ill consequence will be avoided.

It also frequently happens, that when the pustules are nearly dried up, large swellings come on in the legs and feet, which soon ulcerate, and discharge large quantities of thin acrid matter; these ulcers may be washed with an emollient fomentation, though the negroes commonly use warm urine, and dressings of cerate epulotic may be laid over them.

This ointment is made as follows.

Take of olive oil, half a pint—yellow wax, and prepared calamine stone, of each a quarter of a pound. Melt the wax in the oil, and when the mixture begins to thicken, throw in the calamine stone, and stir the whole briskly till the cerate is thoroughly cold.

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During the formation of these swellings, and whilst the ulcers continue open, or at least till the discharge has nearly ceased, and a disposition to heal appears, it will be right to avoid the use of all kinds of medicines; but as soon as these changes take place, a few doses of purging physic should be given.

The secondary fever differs in these climates from that of Europe; it is here like all other fevers of the intermitting or re-

mitting kind: on the commencement of it, if it takes place before the pustules are fully dried up, it may be proper to open the intestines by clysters, in order to carry off as much as possible of the diseased matter, and for the same purpose to obtain as copious a discharge as can be procured from blisters; at the same time the bark should be administered, and as soon as the pustules are compleatly incrustated, a course of purgatives may begin.

CHAP. VI.

Of the Measles in the West-Indies.

THE appearance of this disease differs considerably from that of Europe, and the management and treatment must of course be in some measure varied.

The first attack of the fever differs also greatly in different people; in some it begins suddenly with much violence, and after a day or two is accompanied by the eruption; in others it is of a slow intermitting or remitting kind, with daily paroxysms, and precedes the eruption five or six days: the usual symptoms of a cough, inflammations in the eyes and throat, anxiety, and restlessness, are observable in a very high degree in this part of the world; but the most certain symptom of the approach of this disorder, which occurs in this climate, is the appearance of white thrush-like specks about the gums, which are in almost all cases visible several days before the eruption, and in some instances even before the fever, so that it is actually sometimes possible to foretel the measles before the patient hath received the warning of indisposition; as the fever gains ground, and the appearance of the eruption grows nearer, these specks, accompanied with an erysipelatous inflammation, spread over the whole surface of

the mouth and to the entrance of the gullet, and even as far down the throat as can be discovered; the cough becomes dry, short, and tickling, harrassing the patient continually, who notwithstanding breathes with tolerable freedom, and is not incommoded with much sense of oppression at the breast in the intermissions of coughing; the pimples of the eruption do not appear so clustered as is usually the case in Europe, but are more distinct, of a larger size, and more raised above the surface of the body in every part of it, and the inflammation and heat of the skin is more intense; as the eruptive appearances spread, and the pustules grow more numerous, the inflammation of the eyes, mouth, throat, and skin, becomes more aggravated, and in many instances seems to be continued through the throat, stomach, and intestines; for the patient is in those cases commonly attacked with torturing gripes, and a purging sometimes of blood and matter, and often accompanied with severe vomitings.

If the patient is bled, according to the degree of fever and violence of the other symptoms, and other requisite medical assistance is administered, the eruption and the fever generally disappear about four

days after it first becomes visible; but where medicine hath been neglected, or the bleeding hath either been omitted or practised too sparingly, the fever will sometimes increase at this stage of the disorder, and the inflammatory erysipelatous appearance of the fauces change to a disagreeable swelling, the cough will grow more urgent, the vomiting be incessant, a dysentery attended with acute and continual pains of the belly will come on, and the patient will either be carried off by the inflammation of the stomach and other intestines, or by a mortification seizing these parts.

And, notwithstanding the utmost judgment that can be exerted in the treatment of this disorder, a flux generally succeeds the fever and eruption sooner or later, discharging (sometimes mixed with liquid fæces, and sometimes without it) a quantity of matter, for the most part accompanied, but not mixed with blood; sharp gripings preceding the stools, which are sometimes so frequent as to occasion extreme danger; and beside these gripings, the whole belly is affected with excessive pain and soreness, the patient's spirits are depressed, his strength exhausted, his appetite not only totally lost, but his stomach rejecting all kind of food, the vomiting almost unintermitting, receiving no other than temporary relief from any medicine that can be exhibited.

In children, a constant tenesmus or bearing down to stool occasions the rectum or strait gut to be protruded from the fundament; and in pregnant women a discharge of blood from the womb, and sometimes abortion, is brought on by this disease: and instances have occurred, where, for want of proper bleeding in the feverish state of the disorder, not only the fundament hath been ulcerated, but the thrush or specks which have appeared during the flux have been converted to corroding ulcers, and have spread over the mouth, throat, and lips; nay, a number of small tumors have broke out in different parts of the body, and particu-

larly in those places which have been the seats of blisters, and becoming troublesome and foetid ulcers, have mortified and brought on the patient's death.

Some are not attacked by the flux, but their situation seems more disagreeable than that of others who have this discharge: in these cases an itchy eruption commonly appears on the skin, and boils break out in various parts of the body; but if these appearances succeed the flux, they are in general favourable symptoms. During the flux, a feverish paroxysm of several hours, or even a whole day, occurs in some instances, and in others an intermittent of uncertain continuance; and in most cases, where the disease hath been severe, an inflammatory disposition remains in the constitution for several months after: in some instances the flux exhausts the patients so exceedingly, that they fall into dropsies; and it may in general be remarked in warm climates, that the hale, robust, and strong, suffer most in this disease, and that those who are of weak, tender, and emaciated habits, pass through it almost without indisposition.

As the two different periods of this disorder are marked by fever and dysentery, it will be proper to point out the method of treatment in each state.

In the feverish stage of this disorder few or none die, yet the safety of the patient in the second or dysenteric state of it, depends in a great measure on the treatment in the former; the severest fluxes in all cases attending those who had the highest degree of fever and the most aggravated symptoms of inflammation, who are in general, as hath been before observed, the most robust and vigorous subjects.

It is necessary, therefore, to take proper measures to prevent the formation of morbid matter, which may require to be carried off by the intestines; and to this end, as soon as the patient complains, it will be proper to bleed, (unless the state of body renders

renders it absolutely unsafe) according to age, habit, and other circumstances: if the fauces are not at all, or but little inflamed, and the mouth only is affected, a moderate dose of purging salts may be given the same day, or early the next morning, but this should be omitted, if the appearance of so much of the throat as can be seen, gives reasonable ground of apprehension that the inflammation has reached the stomach, as in this state the slightest purgative is apt to produce too considerable a discharge in this way; and in those cases an emollient clyster may be administered with advantage; the patient should be directed to keep constantly in the air during the day, but to avoid the heat of the sun, and to move about as much as possible; the common drink should be decoctions of emollient herbs, taken somewhat warm, and if the stomach will bear it, small quantities of nitre may be given; the cough may be alleviated by oily mixtures, or emulsions with spermaceti, and a few drops of liquid laudanum may be admitted at night to procure rest; the mouth and throat may be frequently gargled with a decoction of the emollient herbs, sweetened with moist, or as it is called in these islands, Muscovada sugar; and if the inflammation of the eyes is troublesome, it may be cooled by the common collyrium or solution of white vitriol and sugar of lead, but this should be much diluted, or it will rather augment than alleviate the pain.

As the fever and inflammation increase, the bleeding should be repeated, which may also in some instances be necessary, a second time, when the fever is at the height and just before the eruptions begin to flatten; but the purging and vomiting which sometimes come on at this crisis are alarming symptoms, and demand the immediate use of the lancet: and as these complaints are generally occasioned by spasms in the stomach and intestines, and are in most cases attended with excruciating pain, it may be proper to follow the bleeding with opium, administered in

such considerable quantities, that two, three, or, according to the exigency, four grains of this medicine may be required for a grown person in the twenty-four hours; added to this, spermaceti, the compound powder of gum tragacanth, gum Arabic, the gum from the acajou tree, and starch jelly, may be at times prescribed in different forms, as well as in more urgent cases, the testaceous powders, chalk, and the Armenian bole, reduced to a very fine powder, and starch clysters, with from twenty to forty drops of liquid laudanum; and by the use of these medicines, adapted to different constitutions and circumstances, these symptoms are generally removed with ease, safety, and certainty.

In the feverish stage bleeding is chiefly to be relied on for the relief of the cough; where this symptom is more than usually importunate, blisters may be applied to the thighs, but under the preceding management they are seldom necessary; and under this treatment, after the eruption has continued upon the skin for about four days, it begins to disappear gradually, leaving the body, as in Europe, covered with a kind of branny scales; and about the same time the inflammation of the mouth and throat abates, though the cough generally continues some time longer.

Immediately on the disappearance of the eruption, in most cases, but in some not till several days after, the dysentery commences; though it is not a very uncommon case for the purging which began in the feverish state, to be continued to, and form this stage.

If the inflammation of the mouth and throat is totally gone at the time the eruption vanishes, and the skin takes the scaly appearance, it may be expedient, whether the flux has or has not yet approached, to give a moderate dose of manna and salts, with the addition of olive oil; but if any internal inflammation is still supposed to subsist, it will be proper to defer the purging medicine a day or two.

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In the evening after the operation of the opening medicine, it is always right to give a gentle opiate; if the flux is already begun, the laxative generally mitigates the severity of it, or renders it's future progress less violent, but is not to be expected to carry it off, nor any more than the opiate to prevent it's continuance; on the contrary, the stools in general become more frequent from this period, which may be considered as the commencement of the dysentery.

Should the cough continue to be troublesome after the administration of the purging medicines, it may be relieved in most cases by blisters applied to the thighs.

The dysentery being commenced with a discharge of blood and matter in the stools, and accompanied with severe griping pains in the bowels, and the patient having taken one dose of the oily purge, the same course may be pursued as has been already prescribed in the feverish and inflammatory state; the same mucilaginous, softening, and absorbent medicines, being necessary to sheath the stomach and bowels, and defend them from the acrimony of the diseased matter, and the opiates being required to prevent the violence of the evacuation from exhausting the patient's strength, and bringing on faintings, as well as to quiet the spasms, abate the pains, lessen the inflammatory disposition, and avert the dangerous consequences of it's gaining ground: nor is there any danger to be apprehended, that by the use of the opium the matter may be pent up in the body, and a necessary discharge impeded; two, three, and in some extraordinary instances, four grains of opium, taken by a grown person in twenty-four hours, being at this time of the disease also barely sufficient to put such a restraint on the flux, as to prevent it's running the patient down in a very few hours, and yet a larger quantity than we have mentioned can hardly be admitted in any case.

If, from the appearance of the stools, and the continual tenesmus or bearing down to

evacuate, the rectum is discovered to be much irritated by the acrid matter which flows through it; starch clysters, with from twenty to thirty drops of liquid laudanum, may be administered twice a day, which will not only procure present ease, and prevent the ulceration of that gut, but greatly lessen, and by continued repetitions, after a time entirely stop the appearance of matter in the stools; from which circumstance it may be inferred, that the source of this matter is commonly no higher than the great guts, and most probably in the strait gut and the lower part of the colon only; an opinion which seems to be well founded, from an observation frequently made towards the decline of the dysentery, that the patients have three or four stools in a day of a natural appearance and tolerable consistence, and between these stools others of more matter, without even a mixture of fæces.

As we have already observed, there are certain cases in which no flux occurs, and in such instances a second dose of the oily purgative, about three or four days after the first, will most commonly compleat the cure.

When, by the use of the oily purgative, the opium, and the softening, sheathing medicines, the gripes and violent pains in the belly are either wholly gone or considerably abated, and the stools, though still liquid, assume a natural appearance, the following medicine may be administered.

Take of rhubarb powdered, two grains—
of Venice treacle, or mithridate, half
a dram—of toasted nutmeg, five grains.
Make to a bolus with common syrup.
Two drops of oil of nutmeg, or one of
cinnamon, may be substituted for the
powdered nutmeg.

This bolus may be taken twice, thrice, or four times a day, according to circumstances, and a decoction of logwood, or of the bark of the guava tree, with the addition of some warm aromatic, may either
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be taken in the quantity of a large tea-cupful after every bolus, or used as a common drink. If the rhubarb in the bolus just prescribed should bring on a purging after being taken two or three days, it may be omitted for forty-eight hours, and then given again, and so alternately.

When the flux begins to decline, and the stools are considerably lessened in number and are of a better consistence, it will sometimes happen that the belly becomes tight and painful, and shortly after a pretty smart purging succeeds, which continues two or three days, during which these disagreeable symptoms are relieved, but return again as the purging decreases, and so continue to be eased by the purging, and recur on the cessation of it, for a considerable length of time.

As often as this happens, it is necessary to give a small dose of manna or rhubarb; the latter is to be preferred if it does not gripe, and after it's operation, the bolus may be again administered with the decoction as before directed, and in this manner to be persisted in with the interposition of rhubarb, whenever the tightness of the belly or looseness occur, till the intestines are restored to the natural exercise of their functions; but whenever it is necessary to give the rhubarb dose, it should be omitted in the bolus for a day or two after.

It not unfrequently happens, that pretty early in this second stage of the disorder, in case it is attended with little or no purging, or towards the decline of it, if the flux hath been considerable, the patient loses his appetite, and is troubled with sickness, nausea, and frequent vomiting: in these cases an emetic of ipecacuanha, or the tartar emetic, may be given, and after it a moderate dose of rhubarb; but though the symptoms may by this means be removed for a while, yet they are very apt to return, and it will generally be necessary to repeat those discharges after a short interval.

No small degree of care is necessary to prevent relapses, which happen from the smallest degree of excess or irregularity, or from taking cold; and such a length of time is it before the habit is perfectly re-established, that the flux has been known to return a month after it has appeared to be totally stopped, only by the patient's being wetted in a shower of rain, or getting damp in his feet; but this has more commonly occurred when the dysentery after the measles has been rather slight, and the discharge inconsiderable. And as the intestinal parts are in general much debilitated after the stomach and bowels have been so violently affected, and loss of appetite, indigestion, and wind, are the natural consequences, bitter infusions with aromatics may be used with great advantage.

When a discharge of blood from the womb of a pregnant woman is brought on by the violence of the griping pains, and the bearing down to stool, bleeding will be proper, if the patient is of a full, sanguine, or florid habit, but not otherwise; and after that evacuation, it will be necessary to attempt removing as much as possible the irritating cause by a mild dose of manna and sweet oil, to quiet the spasmodic pains by considerable quantities of opium frequently administered, and to defend the gut from the acrimony of the voided matter by clysters of starch with liquid laudanum; however, abortion frequently follows, in spite of every precaution, and this also sometimes happens without any previous hæmorrhage.

After the dysentery has ceased, it is frequently succeeded by a slow discharge or oozing of blood from the pudenda, which sometimes stops, and then returns again without producing abortion; in these cases, if the opiates fail, the following medicines may probably be given with success.

Take of Peruvian bark bruised, one ounce and half—of calcined vitriol, half a dram.
6 M Infuse

Infuse forty-eight hours in a quart of cold water; pour or strain it off fine, and give a spoonful or two of the infusion, according to circumstances, three or four times a day.

Or, take of Peruvian bark powdered, one ounce. Boil it in two quarts of water; then add half a dram of calcined vitriol, let it boil a minute longer, take it off the fire, and when it is cold strain or filter it carefully. Of this add one spoonful to three of common decoction or infusion of the bark, or of pure water, and administer two, three, or four times a day.

During the whole course of the dysentery which follows the measles, the regimen should differ in some respects from that which is observed during the continuance of the eruptive disease; in particular the body must be kept warm, and especially in bed, in order to promote a passage of the vitiated humours by perspiration, and to prevent their flowing with such impetuosity to the intestines: the food in both stages of the distemper should be mild and light, but somewhat nourishing, such as thin broths of young animal flesh, flour with milk, rice boiled, rice gruel, or the like.

Great care and attention is necessary with respect to the article of cleanliness; where numbers are sick together, which is frequently the case with negro slaves, the disease in all stages will generally be much aggravated, and even the nurses and medical attendants have been affected by the dysentery: this has been attributed, and probably with reason, to the effluvia of the excrements, which are peculiarly offensive; they should, therefore, be constantly covered with earth as soon as they are discharged, and as the sick are generally disinclined to motion of any kind, a healthy slave or two should be employed in this business.

Under the management and treatment which we have prescribed, this disease is in general more alarming than fatal; great numbers are reduced very low by it, but far the greater part recover, even when their

situations appear to be dangerous; yet it is unsafe to relax in the smallest degree from the necessary regulations; the changes of the disease must be watched, and the remedies applied in the several stages with some sort of accuracy.

Besides the consequences of the measles which we have mentioned, there are also some others, which though they occur but seldom, should be noticed in this general account of the disease and it's effects.

In consequence of a cold taken, either by night exposure, or by being wetted to the skin, a *tetanus* or locked jaw sometimes seizes the patient soon after the cessation of the dysentery; but this may in general be removed by opiates, frequently administered and persisted in, for it will not in general yield in many days, or in some instances wholly disappear under weeks; from ten to twenty drops of liquid laudanum may in these cases be given every four, three, or even two hours, according to circumstances.

Dropsies are by no means uncommon disorders after the measles; generous food, the bark, and chalybeats, are in most cases effectual for the relief of every symptom of this kind.

The lungs of children are frequently affected after this disease; the first complaint is a dry cough, and this is soon joined by an intermitting fever, with daily paroxysms; and though this fever sometimes ceases for a week, yet it generally returns again: in this situation the lungs appearing rather to be affected by obstructions than ulcerations, the patient wastes away, and death approaches without any violent or acute symptoms.

In this case the bark is by no means advisable, and therefore this fever, which is of the hectic kind, should be carefully distinguished from the ordinary intermittent; and the free use of the lancet, consulting the habit and constitution of the patient, with the neutral salts, accompanied with frequent draughts of diluting liquors, and a
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low diet, are the means to be applied for relief, instead of the quantities of bark absolutely necessary in most inflammatory disorders in this country, where it may be given

freely even in pleurifies and peripneumonies, provided it be accompanied with bleeding to such an extent as may appear consistent with safety and prudence.

CH A P. VII.

Of the Dysentery of the West Indies.

THIS disorder is so frequent in these warm climates, that it may be truly said to be endemial, and it is epidemical in a greater or less degree every year: the first two or three of the hotter months are succeeded by rains, which fall in very considerable quantities in the months of August and September, and continuing sometimes for many days successively, are followed by two or three days of fair weather, and then rain again, and so alternately for a considerable length of time; this fall of rain, in proportion to the quantity, renders the air cold, damp, and moist, as long as the weather continues cloudy, but the breaking forth of the sun brings on a return of extreme heat, and this often happens not only in the months of August and September, but in October, these being generally the hottest months in the year, though the heat is frequently interrupted in the manner just mentioned.

These great and violent changes of the air are usually productive of dysenteries, which commonly become epidemical among the white people, but more particularly affect the negroes, who are in general ill cloathed, and are exposed to the inclemencies of these shifting and varying seasons; and it has been a remark, confirmed by repeated observations, that if the months of May, June, July, and August, are very hot and dry, and the three following months are so rainy that the air is at times rendered cool and moist, with intermediate dry days be-

tween the falls of rain, dysenteries were very frequent and epidemical, and that this disorder rages with a malignancy proportioned to the more sudden or gradual changes of the air and weather, and to the longer and shorter duration of this inconstant season; but as the rainy or variable months differ somewhat in different islands of the West Indies, so the times we have fixed will not correspond with all, though the effect is nearly similar.

This disorder may be occasioned by various causes; the heat and great drought of the air may so act on the fluids of the human body, as to render them acrid and unfit to perform the functions of life, and the most sensible parts of the frame may be so stimulated and irritated by this acrimony, as to act with violence against the ordinary operations of Nature; and as her efforts are always exerted in endeavours to throw off whatever is noxious and offensive by the passages of the skin, the heats are favourable to perspiration; but this discharge being stopped by the fall of the rain and the consequential coolness and moisture of the air, these acrid humours are diverted to the bowels, where they act as stimulants and irritatives, excite fever and inflammation, which contribute to the production of more matter, and of consequence to the increase of the intestinal disorder, which at length is accompanied with tenesmus, violent pain, and other bad symptoms, and which being suffered to proceed without interruption, form

form obstructions, occasion a suffocation of the blood-vessels, a mortification of the intestines, and speedy dissolution.

And as, though dysenteries are always epidemical in the West-India Islands during the rainy season, they are not always equally malignant, but the measure of the prevailing violence is according to the season; this may be considered as the cause of this disorder, or rather of it's first breaking out.

For it is by no means improbable, that it is also sometimes produced by infectious particles, which being exhaled from the bodies of those who are diseased, float in the air, and being received into the mouth with the breath, adhere to the saliva, and are conveyed into the stomach and bowels, where they generate this disorder, when the constitution is in a fit state to receive the infection: but this only happens when the disease has continued a considerable length of time, when many are ill of it together, and the humours becoming putrid and acrid, infectious effluvia are carried by the air, not only from the bodies, but from the excrements of the diseased, and thus the disorder being communicated to the healthy, it becomes both epidemical and contagious at the same time, though it's commencement was of the former kind.

This disorder first seizes those who are poorly fed and cloathed, and who are unprotected from the vicissitudes of the seasons; so that it is very often fatal among the negroes, when few or none of the whites are afflicted with it: however, after it spreads among the slaves and becomes infectious, those who are in more comfortable situations are by no means exempt from it's influence.

This disease does not always attack in the same way: in some instances the patients are seized with a diarrhoea, which after continuing rather moderate for a day or two, increases by degrees till it becomes a direct

dysentery, accompanied with all the usual symptoms of that disorder.

In other cases it approaches with a nausea and sickness at the stomach; slight shiverings, pains in the head, and sometimes in the limbs and over the whole body; and these are speedily succeeded by a fever, pains and gripings in the bowels, and painful stools: the sickness at the stomach increasing, is attended with a disposition or retching to vomit, and sometimes with discharges that way; as the fever advances, the pulse becomes extremely quick, and is frequently strong and hard, though not in general so full as in many other fevers; the internal heat is extreme, but the external surface of the body is less affected by it; as the evacuations grow more frequent, the griping pains increase, and the excrement discharged appears to be mixed with much mucus or slime of the guts, and a very considerable portion of blood; some of the stools contain only this mucus and blood, without any apparent mixture of excrement, and others seem to consist of a thin watery matter only, like the brine in which beef has been salted; and when such is the state of the discharges, they are accompanied with a continual and painful inclination to go to stool. If these symptoms continue unrelieved, if the fever increases the pulse grows more quick, the internal heat is augmented and accompanied with thirst, though the external heat still continues below the usual state of other fevers, which may be accounted for by the flux of all the humours to the bowels; the patient's strength fails, a delirium seizes him, his extremities grow cold, the pulse becomes irregular, unequal, and intermitting, cold and clammy sweats come on the stools pass away involuntarily and sometimes insensibly, spasms in the stomach or hiccups add to the patient's miseries; and, as the coldness of the extreme parts, the sweats, and all the other symptoms, become more violent,

lent, the patient is seized with faintness, which is a prelude to mortification of the bowels, after which all hope is at an end.

The first endeavour must be to abate the fever, and carry off the offending matter; after which attempts must be made to check the discharge, to heal the corroded and inflamed intestines, and to restore their tones so that they may exercise their proper functions.

For these purposes bleeding is first necessary, but the quantity of blood to be taken away must be determined by the feverish symptoms, and depend entirely on the quickness, hardness, and fullness of the patient's pulse, his strength, and other circumstances; and this evacuation will conduce to lessen the inflammation and lower the feverish heat, as well as to check the acrimony of the humours, and their tendency to putrefaction.

After the bleeding, an emetic may be given to relieve the sickness, retching, and vomiting, and the earlier this is administered the more advantageous it will prove, not only in carrying off a part of the offending humours and infectious matter, but also to remove them from the bowels by revulsion, and clear the stomach to make way for the operation of the future medicines; the best emetic in this case is the powder of ipecacuanha, being safe in it's operation, and acting afterwards as a gentle astringent on the bowels.

The effect of the vomit must also be assisted with such medicines as will contribute to carry off the diseased matter in the beginning of the disorder, alleviate the severity of the pain, and abate the flux; to this end—

Take of rhubarb toasted and powdered, one scruple—of electuary of scordium, or water germander, half a dram—of opium, from one grain to two—of oil of cinnamon, one drop—syrup of poppies, as much as will make these ingredients into a bolus. To be taken an hour after the operation of the emetic.

If, by the help of the evacuations and these medicines, a considerable abatement of the fever and purging can be procured, as is frequently the case when the disorder is attacked in it's earliest state, before it has had time to gain much ground, the following medicine is recommended as efficacious in the removal of the remaining fever, as well as in checking the flux and healing the bowels, and is said, with the addition of a proper regimen, to have sometimes effected a cure without the assistance of other medicinal help.

Take the Barbadoes restringent bark, (being the bark of the bastard *locus*) and mistletoe of the lemon tree, of each one ounce—of the bark of pomgranate, half an ounce—of cinnamon, one ounce and half. Boil these in a quart of water till it is reduced to a pint and half; towards the end of the boiling add one ounce of the electuary of scordium, and boil it again for a few minutes, and strain it off. Add to the decoction, of tincture of Japan earth, one ounce—of the sweet spirit of nitre, half an ounce—of purified nitre, half an ounce—of syrup of poppies, one ounce. Mix the whole together, and give three or four spoonfuls every three hours, or after every considerable evacuation by stool. The quantity of nitre and of the opiate may be increased or lessened if it should appear necessary; and where the Barbadoes bark cannot be had, the Peruvian bark may be substituted.

As the nitre is known rather to loosen the belly than to restrain, it may be necessary to observe, that however violent the discharge may be by purging, yet the danger seldom arises from this symptom, but that the violence of the fever and the inflammation of the intestines bring on a mortification in these warm climates which proves mortal; the fever and inflammatory disposition should be lessened or taken off, before any attempts should be made to stop or check the discharge, and if strongly astringent or heating cordial medicines are administered for this purpose, they only serve to add to the violence of the fever,

and increase the other symptoms to such a degree, as to put a speedy end to the patient's life; the safest course is to get rid of the fever and inflammation by bleeding and anti-inflammatory medicines, joined with very gentle cooling restringents, and such opiates as may afford ease to the patient by lessening the irritation of the bowels: nitre may be also given for the purpose of cooling the inflammatory heat of the intestines, in a bolus, with electuary of scordium or Locatelli's balsam.

To children, when the stools are frequent and bloody, and voided with considerable pain, after the bleeding, an emetic, and a small dose of toasted rhubarb, nitre may be given with a little red coral in an anodyne julep, with powder of crabs claws or of calcined oyster-shells; and many instances have occurred, in which, by the assistance of these medicines only, the inflammation and fever have been subdued, the purging stopped, and happy recoveries have taken place; for if those symptoms can be got the better of, the frequency of the stools soon abates, and the quality of them changes advantageously; or if the bowels should be so weakened and relaxed that the discharge continues, an anodyne moderately restringent, and a clyster, will generally reduce it within bounds.

If, after the bleeding, the emetic and the use of the several medicines above prescribed, the fever should still continue, and the frequency of the bloody stools, together with the pain which usually attends them, remain still unabated, the bleeding must be repeated, and even a second time, if the fulness and hardness of the pulse and the urgency of the other symptoms demand it, and the strength of the patient will bear it; from whence also a judgment must be formed as to the quantity of blood necessary to be taken away: after this the ipecacuanha should also be given again; from two grains to five may be mixed with a

scruple of Venice treacle, and after a day or two, if it continues to excite vomiting, it may be accompanied with a gentle anodyne; and between the doses of ipecacuanha, the restringent decoction already mentioned may be taken, if the stools continue frequent, and by this course great hopes may be entertained of a safe and speedy cure.

And when the fever and inflammation continue obstinate, notwithstanding the several evacuations of bleeding and vomiting, and the administration of the medicines which we have prescribed, and the patient is reduced too low to bear farther evacuations; when the pulse sinks, though it still continues quick; when the delirium remains, the skin is hot and dry, and the bloody or brine-like stools are still frequently repeated; the ipecacuanha powder, given in small doses of two or three grains every three hours, till the patient has taken four doses, and making the last dose of double the quantity, will in many cases, after exciting a gentle vomiting, have a surprising effect in restraining the thirst, and bring on a free and genial perspiration over the whole body, this operation of the medicine being properly promoted by frequent draughts of small diluting liquids; and after this crisis the delirium, together with all the other disagreeable symptoms, have gone off by degrees, and the patient's recovery has proceeded happily with the assistance of a few doses of some restringent perspirative opiate.

The painful griping and foreness of the bowels are other disagreeable circumstances which commonly attend this disease, and arise from the great and acrimonious heat of the humours; and the fine soft jelly or slime which sheaths and defends the intestines, being carried off by the continual motion of the matter downwards, the guts are irritated, inflamed, and in part excoiated, and even pieces of the thin membrane which lines the guts, an inch or two long, are in some instances brought away with

with the stools, so that the intestines become sore and painful in a very great degree.

When these complaints are seated pretty high up in the guts, the following electuary is recommended.

Take electuary of scordium, and Locatelli's balsam, of each one ounce—spermaceti, and powder of bole, with opium, of each one dram and half—balsamic syrup, as much as will make the whole into a smooth electuary; of which the quantity of a nutmeg may be taken every fourth or fifth hour, drinking after it two or three spoonfuls of an emulsion with wax.

But if the pain and soreness should be towards the lower part of the belly, approaching to the extremity of the rectum, it is in all probability occasioned by excoriations, or by little ulcerations of that gut, which being irritated by the sharpness of the passing humours, produce a constant and painful *tenesmus*, or bearing down to stool.

In these cases, in addition to the medicines above prescribed, healing balsamic clysters should be frequently injected, and these should be composed of fat broths or milk, with wax, spermaceti, and anodynes. The following may answer the purpose better than most others.

Take of fat broth of mutton or veal, from eight to ten ounces—Locatelli's balsam, spermaceti, and white wax, of each half an ounce—of electuary of scordium or Venice treacle, one dram and half—or, instead of either of the latter ingredients, from thirty to forty drops of liquid laudanum.

When the disease has been severe and of long continuance, and when the pain and soreness are situated in the lower part of the belly, it very often arises from hardened fæces or excrement, which being formed into round pellets or balls by the convulsive spasms of the guts, are baked by the feverish heat which attends this disease to

a wonderful degree of hardness, and are sometimes of considerable size, when towards the close of the disease they are evacuated, so that it is astonishing to find such hard lumps remaining in the guts during the whole continuance of a violent liquid purging, without being either wasted or carried away entire by it; as long as these hard lumps remain in the intestines, they must unquestionably irritate and stimulate them in the excoriated and tender state to which they have been reduced by the constant acrimonious discharge, and therefore the *tenesmus* will continue till they can be brought off: for this purpose, proper purgatives and clysters must be administered; the former may consist of small quantities of manna and rhubarb, with a dram or two of sal polychrestum and a little sweet oil. The following form may serve for the clysters.

Take of warm water, from eight to ten ounces—of sweet oil, half an ounce—of honey, two drams—of Spanish soap, one scruple.

After these hardened fæces have been expelled by such treatment, the use of the before mentioned balsamic and healing medicines generally compleats the cure; the clysters must be repeated till they produce the desired effect.

The regimen during the continuance of the feverish and inflammatory symptoms must be low; after these are removed, the food may be more nourishing, but still continue to be light; and in the decline of the disorder, good broths, jellies, sago, sallow, and such like gelatinous spoon-meats, will assist in healing the intestines, as well as in the restoration of the patient's strength: whatever heats or stimulates must be carefully avoided, not only during the course of the disease, but for some time after it's total removal, as a relapse is frequently more fatal than the original disease; and for the same reason, the patient should for some time

time after he goes abroad be particularly attentive neither to indulge in excess or intemperance of any kind, nor to expose himself to cold, night air, or the hazard of getting wet, and especially in the feet: violent exercise of any kind may also be highly injurious, nor should the patient return to his accustomed diet in food and liquors without much caution; even among the

slaves it is the interest of their proprietors to attend to these articles, though we should hope it is unnecessary to urge any other motives than those of humanity, to lessen the wretchedness of those who have no other hope of alleviation to their miseries, than in the mildness and benevolence of the masters they are destined to serve.

C H A P. VIII.

Of the Opisthotonos, and Tetanus, in the West Indies.

THESE diseases, though little known in England or other northern climates, yet are so frequently seen in the West India islands and the neighbouring continent; that they may be said to be indigenous or endemial in those countries which are within or near the torrid zone. The Greeks distinguished these disorders, as we have already observed in a former part of this work, into three different kinds: the first they called *emprosthotonos*, in which the body was forcibly drawn or bent forwards or downwards; the second *opisthotonos*, when it was bent or forced backward in a curved position, and so remained immovable; and the third, when the body was rigidly and immovably fixed in an erect posture like a statue, or when any particular limb was so affected, they called a *tetanus*. The first seldom appears; the two others very frequently in these warm climates.

And though these disorders have been thus divided, yet are they properly but one disease, arising generally from nearly, if not exactly, the same causes, and differing only in the different positions to which the body is reduced by them.

The causes which produce this disease are in general three, which differ widely from each other, though in particular cases

and constitutions some other causes may concur. The first cause is any small or slight prick or puncture of pin, needle, nail, fish-bone, thorn, or splinter of wood, accidentally received into the head, hand, finger, foot, toe, or some other nervous part of the human body; from the ligatures on the arteries (in which it is probable a nerve may be included) after the amputation of a limb; or from a scratch or cut of a stone, though it appears to be barely skin-deep. It appears almost incredible, that causes so trifling as those of such punctures or scratches should occasion symptoms so violent, and that too in parts of the body remote from those which have suffered the injury; yet the fatal effects of this disease are but too often felt.

The second cause of this disease may be a cold taken by a sudden exposure of the body to a current of cool air, when it is heated by exercise or in a profuse sweat; going into cold water in the same condition, or receiving such a shower of rain as may wet the cloaths to the skin, when the body is in like manner warm or in a state of perspiration.

The last cause we shall mention, is the retention of the *meconium* in the bowels of infants, or the taking any such matter into the

the stomach, as is either of an acrid quality, or disposed to be converted to a hard curd.

From either of these causes may this disorder proceed; the effects of each are very nearly similar, though the approach of the disease is at different periods from the first occurrence of the cause.

When it proceeds from wounds or external injuries, it generally comes on between the tenth and fourteenth day after the prick or scratch hath been received, and sometimes, but very seldom, a day or two earlier; and it frequently comes on when the injury itself hath neither given the patient pain or uneasiness, nor has assumed any bad appearance, but has digested, looked well, and in many instances been perfectly healed up by common applications, and has remained so totally without inconvenience, that the circumstance hath been almost forgotten before those symptoms have appeared which we shall describe hereafter.

When the disorder proceeds from the second cause, and a sudden cold hath been the occasion of it, the patient generally feels the common symptoms of a cold for the first four or five days, about which time, when a fever of the inflammatory kind might be expected to appear, he is attacked by the usual signs of this disease.

When, from either of the causes we have mentioned, children are the subjects of this disorder, it generally approaches within three or four days, and sometimes sooner.

The first complaints are generally an uneasy sensation and a little tightness on the breast; stiffness of the jaws, which increasing by degrees, produces a difficulty of swallowing, though the throat does not appear to be swelled either internally or externally; a pain is felt all down the spine of the back, with a contraction and straitness of the muscles in that part of the body; this is soon followed by the like contraction of the neck, which also continues to increase for a day or two, and then the

neck, head, and back-bone, are forcibly but gradually bent backwards, and the body remains firmly fixed in that unnatural posture; the jaws are now locked close, and immoveably fixed, and about the third or fourth day, or sometimes sooner, an incapability comes on of swallowing any liquid that can be got into the mouth; at this time also the patient is afflicted with strong convulsive spasms, first beneath the breast-bone and at the sides, but soon extending to the neck, jaws, and whole spinal marrow, and repeated frequently with such agonies of pain, and with such force and violence, as sometimes to raise the whole body from the bed with a sudden jerk or twitch to a height almost incredible, and at other times drawing up the middle of the body in a kind of arch, leaving the heels and the back part of the head only on the place where it has laid; or, if the patient should endeavour to lay on his face, bringing his head and heels so near together, as almost to form a circle; but this last posture can hardly be endured, unless, as it sometimes happens, the legs are free from the contraction, and are only extended strongly and rigidly, but remain straight.

As the disease gains ground, these spasms or convulsions become more frequent, and the violence of them is proportionably increased, returning every ten minutes or quarter of an hour, and reducing the patient to the most extreme misery by the inexpressible torment of the pain, augmented by the dread and horror of the returns of the paroxysms, of which the unfortunate sufferer is in momentary expectation.

As the disease is now become a complete *tetanus*, the patient lies in a rigid immovable state in the intervals between the spasms, the only remaining powers of motion being in the tongue and fingers, the patient neither being deprived of his speech, nor absolutely prevented from assisting himself with his hands, though his arms are fixed and useless.

This disease is wholly unattended with fever when it proceeds from any wound or puncture; the pulse is generally perfectly regular, though somewhat slower, smaller, and a little harder than usual; the heat of the body nearly as in perfect health, and the breath as free and easy, except immediately before the approach of the spasms, during their continuance, and a short time after the remission of them, when it is generally short, quick, and agitated; the pulse at the same time being somewhat interrupted and irregular for a few minutes, but soon gradually subsiding and becoming regular, and the breathing resumes as speedily it's accustomed freedom.

The body is sometimes thrown into a profuse sweat by the violence of the pain; yet, as we have before observed, it is unaccompanied with fever or heat; nor is the thirst urgent, or the tongue remarkably foul, though it is frequently stiff and in a kind of torpid state, occasioned by the contraction of the muscles; the urine is lessened in quantity, owing to the inability of swallowing, but it's appearance is no otherwise altered, than by being somewhat heightened in colour; the body is generally costive, the belly drawn inward or flat, and all the muscles of that part, as well as the other parts of the body, affected with rigidity, stiffness, and contraction.

The patient's sleep either wholly forsakes him, or if he falls into slumbers, they are interrupted by the spasms or convulsions, and that so frequently, in the aggravated state of the disease, that he remains almost wholly without rest; the countenance is distorted, languid, pale, and strongly expressive of anguish and distress; and the returns of the convulsions continuing to grow more frequent and violent till they become universal, the unhappy victim expires in some general shock, in most cases retaining his senses to the last moment.

The state of this disease which we have described is such as occurs when the symp-

toms approach gradually, and increase in violence by degrees; and in these cases it may continue to grow worse till the sixth, seventh, and in some instances to the tenth or eleventh day; but when the disease in it's first attack is accompanied with greater violence of the symptoms, or they increase more rapidly and return more frequently, six, five, nay, even four days, sometimes put a period to the patient's life, if the fatal effects of the disorder are not prevented by timely and successful prescriptions: if the patient survives the tenth day, great hope may be entertained of his perfect recovery, though it is several weeks, frequently four, five, or six, before the perfect tone of the nerves is restored, and the compleat use of the muscles.

When this disorder arises from a cold, the same symptoms appear as we have already described; but they generally approach sooner after the cause has occurred, than when they are the consequences of a puncture or wound: for the first three or four days they are also unaccompanied with fever, though the pulse is rather more full and hard, but very little quicker, during this stage of the disorder; but after the fourth or fifth day, the quickness of the pulse is perceivably increased, with an additional fulness and hardness, and a fever comes on, attended with some inflammatory symptoms which seem to require bleeding; a delirium sometimes also approaches, and continues with intervals; the blood which is drawn is more florid and thick than in the former case, where it is usually of a lax consistence and loose texture, much less florid, and in some cases mixed with dark spots; the thirst is also generally more urgent; but in all other respects the access, progress, and symptoms of this disease, when occasioned by a cold, are the same as when it proceeds from external injuries, and the effects of it rather more fatal in this case than the other.

When this disorder seizes infants, the symptoms

symptoms are nearly the same, only that the convulsions generally come on much earlier, as well as the contractions and rigidity: more or less of a fever generally attends this disease in children; and common convulsions, or epileptic fits, in these young subjects, if they continue any length of time, are frequently changed into a tetanus in these hot climates.

Negroes are said to be more subject to this disease than whites; but perhaps this observation arises from the former being more exposed to accidental injuries than the latter, by going bare-foot and generally ill clothed, and from the nature of their labour and occupations, which renders them liable to cuts, scratches, and punctures: they are also accustomed to throw themselves into water when they are sweating with labour or exercise, and so run the hazard of getting colds by this sudden obstruction. White people are however much more frequently attacked by this disorder in warm than in cold climates.

That such trifling causes should produce such violent and frequently fatal effects is astonishing; nor has any clear or satisfactory reason been assigned for it: observation has convinced us, that there is such a thing as consent of parts, and that injuries or irritations in one part of the body will frequently affect another unhurt part in the same manner; as any foreign body settling accidentally into one eye produces disorder in both, and one kidney being inflamed or irritated by the formation or passage of a stone, the other sympathizes in pain and other symptoms; and instances have been met with, where a particular nerve being lacerated or irritated, the whole nervous system has been so affected, as to bring on epileptic fits and convulsive spasms throughout the whole body, and upon the removal of the cause the fits have ceased, and the patient has suffered no farther inconvenience; and that some such consent may occasion this disorder is probable, because

where it has been violent the patient has been often relieved by dividing the nerve somewhat above the wound, soon after which operation the convulsive spasms have abated, and the cure has appeared to be very considerably forwarded by it.

Under this idea, then, our endeavours must be exerted to remove the cause by which the nerves are affected, and to lessen the stimulation and irritation which it has occasioned; and, when this is done, to procure a relaxation of the rigidity and contraction of the nervous, muscular, and tendinous systems.

As soon as any of the symptoms which threaten a tetanus appear, the wound or puncture, however inconsiderable, should be carefully examined, to discover if any part of the instrument with which it was inflicted, whether pin, needle, nail, bone, thorn, or splinter, remains in it; in which case it must be taken away with a tender hand, to avoid as much as possible the laceration of a nerve, and in order to lessen the sense of irritation of that which has already suffered, and to prevent the communication of the effects of the injury to the other nerves, or the system generally: an incision may be made just above the wound or puncture, of a depth sufficient to divide the wounded nerve in two, and the conveyance from that nerve to the rest being thus effectually interrupted, both wounds may be dressed with some mild digestive ointment, in which an opiate may be mixed to lessen the irritation and assuage the violence of the pain.

After this operation, the following medicines may be given.

Take of musk, from eight grains to twelve—
of opium, from one grain to three—of Venice treacle, one scruple—of balsam of Peru, as much as will make a bolus, which may be administered immediately.

Or, take of simple alexiterial water, one ounce and half—of compound spirit of lavender, one dram—of spirit of hartshorn, thirty drops.

drops—of musk, eight grains—of opium, two grains—of balsam of Peru, twenty drops—of syrup of poppies, half an ounce. Make a draught, to be taken as before.

Or, take of opium, from two grains to three—of musk, from eight grains to ten—of balsam of Peru, enough to make these ingredients into four pills. To be taken at once.

One of these medicines must be repeated at such distances as the greater or less violence of the convulsive spasms may direct; if they are strong and frequent, it may be necessary to administer a medicine every six or eight hours; if their approaches are more distant, and the symptoms less severe, an interval of ten or twelve hours may be allowed between each dose; but where the disorder appears in it's most aggravated state, it may be necessary to repeat even oftener than every sixth hour.

Nor is any danger to be apprehended from giving such large quantities of opium in this disease, even though the patient has been before wholly unaccustomed to any preparations of the anodyne kind; far from occasioning a stupor or heaviness, where the paroxysms are strong and the returns of the convulsions quick, the largest doses of opiates seldom even produce any great disposition to sleep, and from sixteen to twenty grains of opium have actually been given within twenty-four hours, which have hardly procured three hours sleep in the whole space, and that at different times in the intervals between the spasms, which in spite of the opiate have generally roused the patient before he had enjoyed an hour's rest; and even the quantities last mentioned have occasioned no subsequent stupidity, sleepiness, or confusion of the faculties, but the patient hath appeared, during the intervals of comparative ease, to be as totally unaffected by these medicines, as if he had not taken them.

Yet opiates seldom fail to lessen and

abate, as well the convulsive spasms as the rigidity and contraction, and with the addition of musk, as before prescribed, are in general effectual to remove this most painful and dreaded disorder. As the violence of the convulsions abates, and the spasms are less frequent, the intervals between administering the doses of opium and musk may be gradually prolonged, till the spasms cease wholly, or the patient's limbs are so far relaxed that he can move them and help himself; nor should these medicines be wholly omitted till every symptom of the disease hath totally disappeared.

But an emollient and relaxing fomentation, used three or four times a day in bathing the breast, stomach, jaws, neck, and spine of the back, will be found of considerable service towards removing the painful symptoms, and relieving the rigid contraction of the nerves, muscles, and tendons, of the affected parts: for this purpose—

Take the leaves of althœa, four handfuls—sage and elder, of each two handfuls—of bruised linseed, two ounces—of Venetian soap, two ounces—of crude sal ammoniac, one ounce. Boil these ingredients a quarter of an hour in one gallon of water; then add of oil of Barbadoes tar, three ounces, dissolved in a pint of common rum—of Venice treacle, two ounces. Mix the whole well together, and make a fomentation. Apply flannels wrung out of it moderately warm to the breast, neck, and spine of the back, every six hours.

After every fomentation, let the parts affected be gently rubbed with the following ointment, and covered with flannel.

Take of the saponaceous volatile liniment, one ounce—of balsam of Peru, two drams—oil of lavender and rosemary, of each twenty drops—of opium, one dram. Make a liniment, to be used as above.

The warm bath hath been also recommended; but whether the relaxation is too sudden

sudden or general, or the water brings on too violent a perspiration, certain it is, that patients have been frequently known to expire soon after their being taken out of the bath: from fomentation and partial bathing no such fatal consequences have ever happened, and it is therefore advised as a measure more safe and equally salutary.

But as in this disease the pulse is generally languid, low, and small, except, as we have before remarked, immediately before and after the spasms and during the continuance of them, when it is quick and irregular, though in general it still continues small, and soon becomes slow again, and the patient is more frequently cool than warm, and his extremities in particular cold and covered with a cold and clammy sweat, some warming cordial medicines are therefore necessary, to increase and keep up the circulation of the fluids; a little warm wine and water may be given three or four times a day, or the following mixture when the patient is low, faint, or sick.

Take simple mint water and simple alexiterial water, of each four ounces—of Madeira or Canary wine, four ounces—of compound spirit of lavender, half an ounce—tincture of castor, and volatile aromatic spirit, of each two drams—of syrup of poppies, one ounce. Mix all together, and give two or three spoonfuls on any particular failure of strength or depression of spirits.

To remove the costiveness which generally attends this disease, and which is augmented by the large and frequent doses of opiates, which are absolutely necessary to the patient's existence as well as his recovery, the following relaxing emollient clyster may be injected once in every twenty-four hours, or oftener if it should be necessary.

Take of the common emollient decoction for clysters, eight ounces—lenitive electuary,

and oil of palma Christi, of each one ounce—of balsam of Peru, one dram. Mix for a clyster.

Bleeding, purging, and other evacuations, are by no means serviceable; on the contrary, they are rather prejudicial, unless the patient happens to be of a very full, sanguine habit, or feverish, inflammatory, or pleuretic symptoms, have been brought on by bad treatment and hot stimulating medicines; in such a case, one moderate bleeding, with the use of cooling medicines, continuing also the administration of the opium and musk at proper intervals, may remove the inflammatory and convulsive symptoms together; however, the lancet should be used with extreme caution in this disease, and particularly when it has been occasioned by a puncture.

When this disorder is occasioned by a cold, as the symptoms are precisely the same as those which precede and accompany the disease that arises in consequence of a wound or external injury, and differ only in the time when they first appear after the occurrence of the cause, so the same methods and treatment are proper in both, excepting only that in the case of which we now speak no incision can be made; and as the perspiration is diminished or obstructed by the sudden cold to which this disease succeeds, the fluids being increased, a fever, commonly attended with some inflammatory symptoms, is produced, and it may be prudent to take some blood from the patient, the quantity of which must be determined by habit, constitution, and immediate circumstances, and some cooling and anti-inflammatory medicines may also be necessary with the opiates and musk.

The patient's recovery from this disorder, incurred in the way last mentioned, generally takes place in seven or eight days, if the means we have prescribed, and which appear to be the best which have been of-

fered, prove successful, though the perfect restoration of health is not accomplished more speedily than in the former case, nor is the disease less fatal when it proceeds from a cold, than when the cause is a wound, scratch, or puncture; indeed, it most commonly proves mortal, if there is any delay in procuring or administering proper medicines.

The tetanus which affects children, is, as we have already shewn, of nearly the same nature, and produced by the same causes, as convulsion fits in England: the first excrement being retained in the bowels, or any matter afterwards conveyed into the intestines capable of being hardened to curd, or the milk being coagulated by an acid in the stomach, the tender bowels of the infant are irritated, and startings and spasms are produced, with the other symptoms which usually usher in and accompany convulsions in children; and, as much slighter causes produce more fatal consequences in the warmer climates, where the nerves are readily and easily affected and irritated, so what occasions convulsion fits in England, brings on a tetanus in the West Indies.

This disorder, when it attacks infants, first seizes them with violent gripings and spasmodic pains in the bowels, then follow convulsive twitchings and regular convulsion fits, and last of all a perfect tetanus, from which a recovery is extremely doubtful; for when the poor, little, unfortunate sufferer, lays in this rigid, contracted, and miserable condition, the smallest and most gentle motion of it's hands and feet, or the softest touch of any part of it's body, or moving it in the smallest degree, if but to feel it's pulse in the most tender way, even the disturbance of the bed-cloaths, or the smallest noise, will immediately occasion the convulsive spasms, and cause it's little body either to be drawn backward in a curve, or extended in a straight figure, fixed and immoveable, in which situation it will frequently remain a minute or two, when

the rigidity will in some measure relax, and the limbs seem more at liberty, till the return of the fits, which sometimes happen in so short a space of time, that eight or ten are repeated within the hour; and when the disease is arrived at this state it is seldom or ever curable.

But on the first appearance of convulsions, assistance should be procured, and means used to carry off the offending cause which stimulates and irritates the tender bowels of the infant, which may be done by such gentle evacuations as are suited to the age; after which, the irritation of the nerves should be quieted and allayed by proper anodynes, and the acidity in the stomach, and the acrimonious quality of the nutritious juices, corrected by fit absorbents.

To answer these purposes—

Take of new milk whey, two ounces—of Venetian soap, one scruple—of finest manna, from two drams to three—of oil of sweet almonds, half an ounce—of oil of sweet fennel seeds, two drops—of balsam of Peru, five drops. Make a clyster, and inject directly.

Immediately after the operation of the clyster, if the symptoms of the approaching tetanus allow time for the working of it, give the following medicine.

Take of fennel water, three ounces—of magnesia, half a dram—of prepared powder of crabs-eyes, one dram—syrup of succory with rhubarb, and solutive syrup of roses, of each three drams. Mix, and give a small tea-spoonful or two, according to the age of the infant, every two hours, or every hour, until a stool is procured; after which it may be given at longer intervals to keep the body open.

Or, take of fennel-seed water, three ounces—of Venetian soap, half a dram—of magnesia, half a dram—of syrup of succory, with rhubarb and fine manna, of each two drams

drams—of oil of sweet almonds, three drams.
Make a mixture, to be administered as above.

Having by the use of one of these medicines procured two or three stools, the convulsive spasms may be abated, and the approach of the more dreadful disorder probably be prevented by the following.

Take of fennel-seed water, three ounces—of magnesia, half a dram—of prepared powder of crabs-eyes, one dram—of musk, three grains—of spirit of hartshorn, fifteen drops—of syrup of poppies, half an ounce. Of this mixture give a small tea-spoonful three or four times a day, or oftener if the convulsions or spasms are violent.

But if there is reason to apprehend that the tetanus is approaching too rapidly to admit of waiting for the operations of the clyster and the laxative medicine, immediate help must be offered in some such form as the following.

Take of fennel-seed water, four drams—of musk, one grain—of liquid laudanum, four drops—of syrup of poppies, two drams. Mix, and divide into two doses, of which give one immediately, and the other if the convulsions return.

The administration of opium being unusual to infants, the attempt may be censured as hazardous; but when no other hope remains of averting the tetanus, in which the little patient's life must be exposed to the most imminent danger, it ought certainly to be tried, more especially as unexperienced persons have frequently given it in larger quantities in much less emergent cases, without it's producing any other ill consequence than a drowsiness of a few hours.

At the same time that this last mentioned medicine is administered, the clyster may be given, and in a short time after it, so as not to endanger both being thrown up by overloading the stomach, the other me-

dicines: the affected parts of the body should also be frequently fomented and anointed as before directed; and if the last mentioned julep does not answer the purpose of keeping the child's bowels in a proper state of looseness, which it seldom fails to do, a small quantity of the laxative mixture may be given once or twice a day, as long as it is necessary.

Different medicines have been prescribed, that they may be adapted to different constitutions and the various circumstances of the disease: sometimes one succeeds when another is inefficacious; even in the same patient, a variety of medicines may be necessary in different stages of the disease, and as the symptoms change or are more or less aggravated.

But among the prescriptions which we have offered, some may be found applicable to almost every state and appearance of the disease, and if administered in time, and with proper judgment, and due attention to the immediate apparent circumstances, will most probably effect a cure.

It is almost impossible to direct a regimen in a disorder which admits of so little being taken into the stomach, that even the necessary medicines are got down with difficulty; however, the food which can be swallowed should be of a light, nourishing, and comfortable kind, and where no fever attends, a little generous wine may be mixed both with the food and drinks; the patient should be kept as quiet as possible, and all means should be devised to prevent the agitation of his mind on any account, which will add very considerably to the indisposition of the body.

The same care, both with respect to food and liquors and to quiet of body and mind, must be extended beyond the continuance of the disease; relapses are usual and extremely dangerous, and it not unfrequently happens, that when the tetanus hath been occasioned by a wound or puncture, and the patient hath recovered, a violent cold

or a fit of passion hath brought the disorder back, and the second attack of it hath been stronger and more difficult of cure than the former.

Nor must we omit to reiterate our caution, to be early in the application of means for relief; this disorder is prevented without much difficulty, and the progress of it stopped in the early stages with a little

more; but if it is suffered to gain ground till it arrives at the height, it generally baffles the skill of the physician, and leaves the patient no other hope of relief from the most excruciating agonies, than in the most fatal event: there is no disease, to which the human frame is liable, that calls so much for early and vigorous measures.

CHAP. IX.

Of the Madness occasioned by the Bite of Mad Animals in the West Indies.

AS a method of treating this dreadful disorder hath been discovered, which is in almost every case successful in these climates, though no adequate remedy hath yet been found either to prevent or remove it in Europe, it will be proper to treat of the effects of these bites in this place, as fully as if the disease arising from them had not been mentioned in a former part of this work, where the attempts to cure which we have described are confined to England only.

This disease is much more frequent in the West India islands than in Europe; but, happily for the inhabitants of these warm climates, its effects are less fatal, and the treatment and method of cure are as well known as they are generally certain and safe.

Though this disease, in these warm climates, is indigenous to the dog kind, yet in the human species it always proceeds from a poisonous contagion taken into the blood, by wounds inflicted by the bite of some animal: among the brute creation, dogs, foxes, and wolves, which are all of the same tribe, are said to be subject to this disease from internal causes, without receiving any infection from the bites of other animals, but it is apprehended that cats, apes, horses,

asses, mules, oxen, sheep, swine, and fowls, are not liable to it, unless they are first bitten by some disordered animal, either of their own or any other kind.

The madness occasioned in the dog kind by internal causes, arises generally from the long continuance of heat and dry weather in these climates, and from the want of water, which is the natural consequence of such seasons; from their being ill-fed, or having the principal part of their sustenance composed of putrid, rotten, and maggoty flesh; the carcases of animals, which dying by disease or accident, are soon reduced to such a state of offensive putrefaction, as to be extremely unwholesome even to dogs and other carnivorous beasts.

The signs of madness in the canine species in the West Indies are thus described. Soon after the dog hath been bitten by a mad animal of the same species, he begins to look heavy, sad, and endeavours to hide himself, or retires to some dark and bye corner; he seldom barks, yet will growl at strangers, and sometimes attempt to fly at them, though he still knows and is fond of those to whom he has been accustomed; after this he begins to decline eating and drinking, frequently touching the food
that

that is offered him with his tongue, but refusing to take it, he hangs his head, ears, and tail, seems weak and drooping, and often lies down; and thus far, though the bite may be dangerous, it is not always infectious.

The second stage of the disorder now comes on, and the animal begins to breathe short, quick, and hard; to open his mouth wide and shut it hastily, leaving the tongue hanging out between the teeth; much frothy flaver is now discharged from the mouth, and though the dog seems to be half asleep, yet he will rouse suddenly, and seize any person who is unfortunate enough to come in his way; he runs forward without turning, though not in a direct line, and is unmindful of the calls even of his master, whom he now seems to forget.

As this disease gains ground, his eyes appear dull and dusty, and much water falls from them; his tongue changes to a lead-colour, he grows weaker but more furious, attempts to fly at man and beast, but falls down before he can reach the object; and in this way he generally expires within twenty-four hours after the approach of this last stage, in which the bite is much more noxious than in the former part of the disorder, the danger and fatality of the disease increasing, in proportion as the wound is inflicted nearer to the animal's death.

Though these signs differ but little from those we have described in Europe, yet we think it necessary to repeat them here, as in countries where the disorder is so extremely prevalent, it behoves all persons to be on their guard against every animal which may be supposed to be affected by it; and where, from the state of the body, and the disposition of the constitution, it is so easily communicable to the human species.

For though we do not altogether credit those relations of this disease which have

recounted the communication of it by a kiss, by receiving the flaver on the lips or tongue, or by biting a piece of thread on which some of the froth of a mad dog has long before fallen; yet there is no doubt but the slightest bite, even tearing the skin so as scarcely to draw blood, will produce this disease, nor is it improbable that a wound inflicted with the same instrument which has killed one of these mad animals may occasion the same species of madness.

The opinion that the poison or infectious matter which produces this disease will lay dormant in the body for many years, and at last be brought into action, has also been pretty generally exploded, notwithstanding the ancients maintained it with great earnestness, and brought many apparently well authenticated relations in support of this doctrine.

The following are the symptoms of this disease in mankind as they are observable in the West Indies. The part which has been wounded begins to grow painful sooner or later, but generally within a month or six weeks after the injury has been received; then wandering pains gradually spread themselves from the wound to the adjacent, and after some time to more distant parts of the body; a weariness, sense of weight, and disinclination to motion, follow; the unhappy patient's sleep is disturbed with horrid dreams, and interrupted by startings, twitchings, and convulsive spasms, with continual restlessness, and unceasing tossing and tumbling in bed; the spirits seem to be exceedingly depressed, sighs escape involuntarily, the countenance expresses grief, and the patient desires to be alone, and avoids entering into conversation, or engaging in any of his usual employments or amusements: if, during the continuance of these symptoms, blood is taken away, it has the appearance of perfect health, and this may be considered as the first stage of the disorder,

der, which is of longer or shorter duration, according to the constitution, habit, and other circumstances.

As the disease proceeds, all these symptoms are aggravated, and in addition to them the patient is troubled with great oppression at the breast, violent difficulty of breathing, and inexpressible dread and horror of mind; which is considerably increased at the sight of fluids, or of any polished body which resembles water, either of which brings on tremblings and extraordinary agitations. The patient now loses his appetite, though he is still able to swallow solids and medicines; but attempts to touch any liquids are attended with intolerable anguish, and bring on tremors, convulsions, and in some instances raving madness; these symptoms are accompanied with nausea, sickness, and a disposition to vomit, and glutinous matter of a brown colour and bilious quality is thrown up: at this period of the disease a violent fever comes on with internal heat and dreadful thirst, and sometimes a priapism; sleep forsakes the patient totally, and his thoughts and ideas are confused and rambling, his conversation incoherent and absurd, and sometimes broken in upon by paroxysms of absolute madness.

And now the last stage commences with a still higher aggravation of all the foregoing complaints: the tongue now becomes of a dark brown or black, grows dry and crusty, and is sometimes thrust out of the mouth; the voice assumes that kind of hoarseness which is brought on by any unusual exertion of it; the thirst is insufferable, yet every attempt to drink produces the effects which we have already described now heightened and augmented; large quantities of frothy saliva are gathered in the mouth, which the patient having attempted in vain to swallow, endeavours to discharge on the bye-standers, whom he also makes efforts to bite, though he is sensible enough of his own situation to warn them of the danger of approaching him; he rages, he

foams at the mouth, and groans horribly; the pulse sinks, the breath fails, and cold clammy sweats cover the breast, stomach, and face; the ravings are more frequent, yet not continual, for there are intervals of reason in which the patient expresses his apprehensions of his own approaching fate, and of offering injury to others; and thus in general, on the third or fourth day from the seizure, death puts a period to his miseries by suffocation, or in a fit of convulsion.

When an accident of this kind happens, and it appears certain that the animal by whom the patient has been bitten was actually mad, the most adviseable method is immediately to cut out the part, (if it can be done with safety) and then to apply a cupping-glass over the doubly wounded place as fast as possible, to draw out the blood and any of the poisonous matter which may have mingled with it before it can be carried into the circulation; after which the whole wound should be cauterized, or burnt with the actual cautery, a red-hot iron, and dressed with some digesting salve or ointment; the wound should be kept open as long as possible with gentle escharotics, and washed daily with vinegar or salt water, if it is at hand: if the wound is received on a part that cannot be cut out with safety, it may be lightly scarified near the bite, and then cupped, cauterized, and treated in all respects as above.

And notwithstanding we do not place implicit faith in the opinion that this disease may be communicated by the froth or flaver without a bite, yet we should by no means advise the omission of any precaution for the prevention of so horrid a calamity; on the contrary, we would recommend the burning the patient's cloaths, or at least such parts of them as have been saturated by the flaver; and if a negro is the subject of this misfortune, his straw or other bedding should be in like manner consumed, as well as that on which the disordered animal has

has laid, as it has been conceived that cows and other beasts have been infected by eating it: whatever weapon has been used in the destruction of a mad animal should certainly be cleansed with great care, as there is a much greater probability of communicating the infection in this way.

After the preparatory operations above directed, or when they have been neglected till it is too late to cup and cauterize the wound, provided no considerable quantity of blood hath been lost by the cutting and cupping, it will be necessary to take away some, especially if the patient is of a full or sanguine habit; if his stomach is foul, an emetic will be also proper, but both the bleeding and vomiting must be governed by circumstances.

After these evacuations, the following bolus may be given at bed time.

Take of musk, sixteen grains—of native cinabar finely powdered, from half a dram to two scruples—of the saponaceous pill, eight grains—of camphire, six grains—of balsam of Peru, enough to make the whole into a bolus.

After this bolus, a sufficient quantity of weak white wine whey should be drank to excite moderate perspiration.

On the following morning the patient may take a cooling purge, and in the evening of the same day, after the operation of it has ceased, the patient should bathe either in the sea, or if that is too distant, in a cold bath or river, and either plunge himself quite under water, remaining there as long as he can hold his breath, or if he has not resolution enough to perform this himself, it should be done by another person; after repeating the immersion two or three times, the patient's body should be rubbed, not only till it is quite dry, but till a gentle warmth is produced; he should then be put immediately to bed, a bolus as above prescribed should be administered, after which he may drink half a pint of the infu-

sion of valerian root and the bark of saffrafras, and at a proper distance as much warm white wine whey as will bring on a moderate sweat, and continue it through the night; and this course of bathing, sweating, and medicine, must be repeated at least four times in as many successive days; but if the animal from whom the infection was received was in the heightened or last stage of madness, the course should be continued near a fortnight, and repeated again at the next full moon and the succeeding change of it: and these measures have in many instances prevented the actual approach of the disease, even after the appearance of some of the first symptoms, such as heaviness, dulness, and disposition to solitude.

After the last sweating the patient may bathe in the sea or cold bath in the morning, and then put on his cloaths and go about his ordinary business, which will prevent his being liable to take cold, and bringing on a fever, which under these circumstances might be attended with very disagreeable consequences.

Having thus treated of the preventive cure, we shall proceed to speak of attempting it after the disease has actually occurred, and the symptoms have already appeared; but in such cases the application should be made with all possible speed, as the hope of cure is proportioned to the stage of the disease, in which medicines have been administered, and proper treatment hath commenced.

And here it may be necessary to observe, that as the hydrophobia is occasioned by convulsive spasms of the gullet and organs of swallowing, and not from any inflammation of those parts, though the repetition of these spasms, and the want of supply of diluting liquors, may at last bring on an inflammation, which is actually the effect and not the cause of the hydrophobia; and as bleeding may abate these spasms, and prevent the inflammation from coming on, it may be necessary in a moderate way at the

the first approach of the symptoms, and as the disease gains ground a still larger quantity may be taken off; yet it seems that the principal part of the cure depends upon the effects of the musk and other antispasmodic medicines which we have before prescribed, which may so attenuate the infected matter, as to fit it for being carried out of the body by perspiration, and this not only in the preventive cure, but in the early stages of the disease itself.

As we gave a case of the hydrophobia in treating of that disease among those of Europe, we shall subjoin a few to illustrate the treatment and method of cure practised in the West Indies.

CASE I.

A Lady's two sons, her housekeeper, and seven negroes, were all bitten in one morning by a mad dog, and a month after the accident the housekeeper died raving mad with the hydrophobia.

This fatal event having alarmed the family, a physician was sent for, and on examining the young gentlemen (the eldest of whom was of a sanguine and healthy constitution, and about eighteen years old; the youngest about thirteen, and of a more tender habit) it appeared, that each of them had been bitten in a leg, and that the wounds, which were not at first deep, had been healed up and cicatrised above a fortnight, and seemed at that time perfectly well.

The eldest son was ordered to be bled, but not the younger, after which a smart cooling purge was administered to each, and at night the bolus, with musk and cinnabar as directed in the preventive method above prescribed, lessening the quantity proportionably for the younger patient; this was succeeded by the sweating and the bathing in the sea the succeeding evening, with a repetition of the bolus and sweat after it; and

this course being continued the proper time, they both escaped this dreadful disorder.

Of the seven negroes who were bitten by the same animal, five were the property of the lady, and the other two were hired slaves; the former being treated in exactly the same way, remained totally unaffected by the disorder, but the two unfortunate hirelings, not being taken the same care of, died mad and hydrophobous about two months after the housekeeper.

Thus it appears, that out of the ten persons, who received the poison from the same dog, and nearly at the same time, seven were entirely free from the disease by taking these antispasmodic medicines, and using the other precautions, whilst the other unfortunate three, for whom no means were used, fell sacrifices to the infection; and this serves to shew clearly the efficacy of this preventive method of cure.

CASE II.

TWO negroes, the property of the same person, were bit by a mad dog the same day; one of them complained immediately, and as the wound was in a part of the leg which did not admit of being cut out, the cupping-glass was applied and the wound cauterized; after which the course of medicine and treatment prescribed in the last case was pursued strictly, and the man continued well ever after.

But the other negro having paid no regard to his wound, it healed, and he felt no ill consequences from it till the next full moon, when he grew dull, heavy, and solitary, could by no means be induced to apply to his labour, and having eloped and secreted himself, was found the next day in a retired corner, endeavouring to hide himself from mankind.

In this situation no attempt was made to bleed him, as he was of a weak and spare

spare habit; but as he was suspected to have a foul stomach, an emetic was ordered, and he threw up a considerable quantity of greenish bilious matter: after the operation of the vomit, the following bolus was administered.

Take of musk, twelve grains—of native cinabar finely powdered, one scruple—of the saponaceous pill, six grains—of camphire, five grains—of balsam of Peru, enough to make a bolus.

And this medicine, which differs only from that already prescribed as a preventive, in the quantity, which was in this case lessened on account of the patient's constitution, was followed by warm diluting drinks, to promote a sweat as before directed, which took effect properly.

The next morning a cooling purge was administered, and in the evening he was put into a river, the sea being too distant, and kept under water as long as he could remain there with safety; and after the bathing, being rubbed dry, he was put to bed, and the bolus and sweating repeated.

At this time, though the symptoms did not appear to be much abated, yet it was very apparent that they had not increased; but as the patient's pulse began now to quicken considerably, it was thought necessary to take away ten ounces of blood, and after this evacuation they very soon became tolerably regular; and the same medicines, with the bathing and sweating, being continued, he was at the end of seven days pronounced perfectly well, and resumed his usual employments.

But the same symptoms returning at the next full moon, the course was not only recommenced, but persisted in for a much longer time; and the complaints being thus removed a second time, and proper cautions used at the approach of the succeeding full moon, by giving a bolus or two, and repeating the bathing and sweating, he

also remained from that time without being visited by any of the complaints.

C A S E III.

A Young gentleman, about eighteen years old, was bitten by a mad dog; the wound was in the back-part of his leg, about four inches above his heel, and after bleeding a little was healed up in about a fortnight; at the next full-moon after he met with this misfortune he appeared to be heavy, dull, and very much dejected, but in three or four days these symptoms disappeared, and he remained well till the succeeding full moon, when all these symptoms returned in a much stronger degree, attended with a great desire of being alone. On the first night after this second seizure he had little rest, and when he fell into a sleep it was disturbed and interrupted, and at the request of his father he rose and dressed himself, but immediately retired to a dark place under the roof of the house, and being desired to leave it, declined it, declaring his unwillingness to see or speak to any person; a physician being sent for, who was intimate in the family, and well acquainted with the patient himself, he was with difficulty prevailed on to receive his visit, which he at last admitted on condition that he should be unaccompanied. Being questioned by the physician about the bite of the dog, he said, "*that was nothing, it had been healed a fortnight;*" and he had continued well ever since: but he complained that he had now an uneasy sensation and weight at his breast and stomach, felt himself extremely dejected without being able to account for the change, and acknowledged his present propensity to solitude, though he was naturally of a lively and chearful disposition.

It being apparent that these were all symptoms of madness approaching from the

bite of the dog, which animal could not however be inspected, having made it's escape; eighteen ounces of blood were ordered to be taken from him immediately; in the evening an emetic was administered and worked off with green tea, and the following bolus was given at bed time, and after it a sufficient quantity of white wine whey to keep up a breathing sweat through the night.

Take of the saponaceous pill, ten grains—of volatile salt of amber, and camphire, of each eight grains—of musk, ten grains—of diuretic salt, one scruple—of oil of sassafras, two drops—of balsam of Peru, enough to make a bolus.

The next morning the patient took a brisk cooling purge, which operated freely, and the following night the bolus was repeated; he slept better, and sweated copiously both nights, and finding himself better, went to the sea, and bathed every night for five or six nights, taking the bolus, and sweating after it regularly: at the end of this time, the bathing, medicine, and sweat, were only repeated every other night, and in this way were continued three weeks longer, when finding himself perfectly well, the whole course was omitted, and the patient remained in perfect health.

C A S E IV.

A Middle-aged white woman, of a good constitution, though not extremely robust or strong, having been bit by a mad dog, remained in health after the healing up of the wound near three months, about which time after the bite she was seized with the first symptoms of the disease, and as the circumstance of the accident was hardly remembered, no notice was taken of her indisposition, till the signs of madness came on, and before any medical help was procured, the hydrophobia had been upon her

near thirty hours, and the madness was so violent, that she was bound to the bed when the physician first saw her.

She was immediately ordered to be bled to faintness, and as much blood to be taken away as could be drawn off without immediate hazard of death.

Two hours after this operation she was plunged into a tub of cold water, immersing her head and whole body, and this immersion was repeated two or three times, the patient being each time kept under the water as long as possible without actual drowning; she was then taken out of the water, rubbed perfectly dry, and put into bed, and immediately after one of the foregoing boluses with musk and cinnabar was administered, which she swallowed without much difficulty, as no liquid of any kind was offered her with it.

About three hours after this medicine she could bear the sight of fluids; a draught was given her of the infusion of the root of valerian and the bark of sassafras, with nitre and diuretic salt, sweetened with sugar, and this was got down with little difficulty; about half an hour after she drank some white wine whey with tolerable composure and ease.

In two hours after the draught, and about five hours after she had been bathed, great part of which time she had sweated freely, she fell into a sound sleep, which continued for four hours with very little disturbance or interruption, the perspiration continuing the whole time, and she awoke calm and sensible, and the aversion to liquids was so much abated, that she drank plentifully of the white wine whey to keep up the sweating, taking one of the draughts every third hour; and this warm, breathing perspiration, was continued forty-eight hours, the bolus having been also thrice repeated in that time.

On the morning after the discontinuance of the sweating, a smart cooling purge was administered, which operated well, and she con-

continued the use of the whey freely; at night the bolus was repeated, with whey after it, and she slept well, and had a gentle perspiration through the night: in the morning she appeared to have lost every symptom of the disorder, and to have no complaint but the weakness which had been occasioned by the evacuations; from this she was soon relieved by nourishing diet, and lived many years after without any return of the disorder.

From these several cases it appears, that an almost infallible method may be pursued of preventing any ill effects from the bites of mad animals in warm climates, and that the means of obviating the dangers of the hydrophobia, one of the most horrid dis-

eases which afflict human nature, are simple, and so easily attainable, that it would seem an unpardonable neglect not to apply them, where even a shadow of suspicion arises that a wound has been inflicted by an animal in a state of madness.

And from the cases which we have selected it is equally apparent, that well-grounded hope of cure may be entertained, even after the approach of the disorder itself, and almost in every stage of it, if the friends and attendants of the patient are not induced by ill-judged tenderness to abate of pursuing rigidly a line of treatment, which though it may appear somewhat severe, is absolutely necessary to the preservation of the unhappy victim of this active and deadly poison.

C H A P. X.

Of the Chronic Thrush of the West India Islands.

THIS malady was rarely seen in these islands forty or fifty years ago, but it has continued to increase, and has of late years become extremely frequent, though it does not seem to be in the least infectious or contagious. The patient who is about to be attacked by this disease, usually first complains of an uneasy sensation, or slight burning heat about the breast or upper mouth of the stomach, which comes slowly on, increasing gradually, and rises up the gullet into the mouth, without being attended with any fever, the least feverish heat, or much pain, and most commonly without any observable intemperance or irregularity in living, or without any surfeit, taking cold, or being preceded by any sort of fever or other disorder to which it can be attributed, or any manifest or immediate cause to which it can be ascribed. Soon after this burning heat, small pustules or

pimples, no bigger than a pin's head, and filled with a clear acrid water, begin to rise, generally first on the end and sides of the tongue, and gradually increasing in number but not in magnitude, spread slowly under the tongue, and sometimes to the palate, the roof of the mouth, and the inside of the lips; soon after the thin skin which covers these pustules slips off, and the tongue looks red and somewhat inflamed, though not swelled, yet is almost raw like a piece of raw flesh, and so tender and sore that the patient can eat no food but such as is soft and smooth, nor drink any thing that is vinous, spirituous, or the least pungent, without acute pains, so that he frequently suffers much from the want of proper nourishment. In some a spitting comes on, and continues a long time, which is so far from being of any service, or giving any relief to the patient, that, on the contrary,

trary, it drains and exhausts the fluids of the body, and contributes to waste and debilitate it: in this state the patient continues several days or weeks, nay, even for months, sometimes a little better, then worse again; and after a considerable time, sometimes earlier and sometimes later, the pustules will disappear, and the mouth grow well without any medicines or applications, or any apparent cause; and having continued so for several days or weeks, the patient finds a burning heat in the stomach and gullet, attended with eructations, and sometimes vomitings, discharging a clear acrid watery phlegm, which is very hot, and most commonly, though not in every case, very acid.

After these complaints have continued a little time, a diarrhoea comes on, the continuance of which is longer or shorter in different patients, and sometimes in the same persons at different seizures or paroxysms; some it troubles for many weeks, and in all it greatly wastes the flesh and strength, and depresses the spirits exceedingly: this diarrhoea also sometimes stops at different periods without any medicines being taken, or any means used to check it, and the patient thinks himself better for a short time, but in general the acrid humour soon returns to the mouth again with all the same symptoms, but in an increased or aggravated degree; and after some stay there, it removes back to the stomach and bowels again: and thus a shifting of the humour from the mouth to the bowels, and from the bowels to the mouth, is frequently and sometimes suddenly made, without any manifest or perceptible cause. In some particular instances, though they do not often occur, after the disease has continued a long time, it affects all the first passages from the lips to the fundament at the same time, and excoriates the last; and cases have occurred where the pustules have appeared about the genital parts, as sometimes happens in the common thrush, and others where it has

broke out like an impetigo, or ring-worm, about the mouth.

During the progress of the disease the patient is perfectly free from any fever or feverish heat, and his pulse is all this time rather more small, low, slow, and languid, than when he was in full health, but his countenance is rather paler, and his body, and particularly the extremities, somewhat colder; nor is the patient troubled with thirst, except what the diarrhoea causes when it continues long, and that seldom excessive or violently urgent; the patient's skin is generally dry during the whole course of the disease, and he perspires very little: by these frequent shifts and changes, which this acrid humour makes from the mouth to the stomach and bowels, and from those to the mouth again, the patient is greatly emaciated and weakened; for when it is in the mouth, the tongue and every other part of it is, as before observed, so excoriated, raw, tender, and sore, that he can scarce take any other nourishment than liquids and spoon-meats without exquisite pain, and when it is in the stomach, it occasions such a painful burning sensation, and such a frequent gulping up, or vomiting, a clear, acrid, acid liquor, together with whatever food is taken down, that the stomach is unable to retain and digest a sufficient quantity of nutrition to supply the body with juices to support life: and when the humour falls upon the intestines, it produces the diarrhoea with a sense of heat, and sometimes a griping, (though the last is not a constant symptom) with hot stools, and a tenesmus, or perpetual inclination to go to stool, so that most of the nutritious juices run off that way, and the patient is by this means deprived of his strength. From the continuance of these circumstances, and the frequent shifting of the disease from place to place, almost continually, thus preventing the sick from taking proper nourishment, an atrophy or wasting of the flesh is produced, under which the patient

patient sinks, or a consumption comes on, which soon ends in death.

This is an exact description of a disease and its symptoms, which frequently attacks the inhabitants of the West India islands, and too often proves fatal.

The nature, symptoms, and appearances of this disease, are considerably different from those of the true aphthæ, or thrush, either of the ancients or moderns; the latter disorder being either attended with a fever at its first approach, or the first symptoms are immediately followed by a putrid fever, an irregular intermitting fever, a dysentery, a feverish diarrhœa, or some other fever: but this comes on gradually, slowly, and almost imperceptibly, and always without fever either preceding or accompanying it in any part of its progress. The pustules of the common thrush are usually much larger, and either suppurate and fill with a concocted matter, and form little ulcerations, or turn black and become gangrenous. In this disorder the pustules are very small, and fill with a clear, acrid, watery fluid, which excoriates the parts, but they rarely or ever fill with matter, except here and there a single pustule when the disease has continued long; and these never form ulcers or turn to gangrene. This disorder usually seizes people advanced in years, very seldom young people, and never children. The common thrush most frequently seizes children, more rarely youths, and sometimes elderly persons, but only with or immediately after some severe fever. This disease is never accompanied with a fever in any degree, or in any stage of it, but on the contrary the patient has generally a small, low, and languid pulse, and is usually colder than in health. The common thrush is but of a short duration, is an acute disease, and the patient either dies or recovers in two or three weeks, or less, from the attack; but this disease continues with short intervals of being a little better, and then worse again, for many months, and in some

instances for years, before it proves fatal: indeed, some persons are said to have lived under it for eight or nine years; though less than a year has put a period to the lives of others, especially if they had lived too freely, or did not seek for proper assistance in due time.

It also differs considerably, and in many respects, from an erysipelas or any erysepalatous eruption; and in many respects from an impetigo, though it resembles that disease more than any other; and if it was external, would probably produce scaly scabs on the skin after the pustules broke.

As this disease comes on so slowly, and increases gradually and almost imperceptibly, and continues with little other pain or inconvenience to the patient than the soreness of the mouth, and sometimes a little griping in the bowels, it too often passes unnoticed, or is trifled with, till it is far advanced, and even then, it is sometimes difficult to convince the patients that they are in any danger from it, or to prevail on them to take necessary medicines and use proper precautions; so that it is too often neglected till it is beyond the power of medicines, or the reach of art. No description of this disease being found in any author, either ancient or modern, the foregoing has been obtained by carefully observing its symptoms, and examining what functions of life were either impaired, irregularly performed, or obstructed; and from thence the treatment and method of cure hereafter recommended hath been also deduced.

As this distemper generally comes imperceptibly on, and often without any apparent cause, it is difficult to discover what is the original occasion of it; but it appears from the nature, symptoms, and disposition of this disease, that whatever diminishes the strength of the vital powers, and lessens the motion of the circulating fluids, and at the same time obstructs the passage of the quantity of matter which

ought to be carried off by insensible perspiration and sweat, may be the primary cause of this disease; and these causes may be various, such as a natural delicacy and weakness of habit, or too great a relaxation, of the solids; taking cold, using wet linen, damp sheets, or otherwise too suddenly stopping or obstructing the perspiration in such a weak, relaxed constitution; frequent excesses in drinking vinous or spirituous liquors; too great anxiety, distress, or other agitations or passions of the mind, and a great variety of other circumstances, which tend at the same time to relax the solids, and diminish the insensible perspiration.

From the small, low, weak pulse, from the total absence of fever, and from the coldness of the body, and especially of the extreme parts, it is apparent that there is too great a relaxation of the solids, and consequently a great diminution of the vital powers and the motion of the fluids; the dryness and roughness of the patient's skin, which usually attends this disease, shews an obstruction and great want of perspiration and sweat, which in these warm climates generally are and ought to be considerable in a state of health: and the excoriation and soreness of the mouth, tongue, throat, stomach, and intestines, plainly demonstrate, that an acrid or sharp humour is turned upon those parts, and produces those effects; so that a relaxed state of the solids, a diminished motion of the fluids and obstructed perspiration, and an acrimony of the humours arising from thence, and increased by the heat of the climate, are the immediate concurring causes of this disease; for it is well known, that the perspirable matter, or any other excreted fluid being obstructed and thrown back upon other excretory vessels, soon becomes acrid, and that it must still be rendered much more sharp by retention in so warm a climate.

These being the causes of this disease, our endeavours to obtain the cure of it must be directed to cleanse the first passages, open the perspiratory pores, and restore a free perspiration and sweating; to correct and carry off the acrimony of the humours, to check the purging, and strengthen the tones of the stomach and intestines, and assist nature to expel the humours from the internal parts to the surface of the body, that they may be properly and naturally carried off by perspiration and sweat, and to strengthen the relaxed solids, and increase the motion of the fluids, and thereby contribute to re-establish health, by restoring and continuing a free perspiration.

As the humours are thus turned upon the first passages by the above mentioned causes, and have had their course that way for a considerable length of time, as is commonly the case, the stomach and bowels are generally loaded with phlegm, and are foul; an emetic is therefore first necessary, both to cleanse them and render the other medicines more effectual, as also to encourage perspiration: for these purposes the powder of ipecacuanha is unquestionably the properest; and a dose of toasted rhubarb, with an opiate and perspirative, should be taken after it; and if the diarrhoea has continued some time, it will be proper to give a small dose of the ipecacuanha powder, to the amount of two or three grains, about five o'clock in the evening, and a perspirative opiate after it has operated once or twice, at going to bed, for six, eight, or ten evenings, according to the length of time that the diarrhoea has continued before the commencement of this course.

After this preparation, the following alteratives and corroborating perspiratives may be given.

Take of precipitated sulphur of antimony, five drams—of calcined quicksilver very finely pow-

powdered, one scruple—gum guaiacum powdered, and extract of gentian, of each one dram—of camphire, two scruples—of opium, ten grains—of balsam of guaiacum, enough to make these ingredients into a mass, which is to be divided into sixty pills; of which the patient may take three every night at going to rest, drinking after them two or three ounces of the following infusion.

Take Virginian snake-root, the bark of sassafras, and of pomegranate, of each one ounce—of cinnamon, two drams—of salt of wormwood, one dram. Mix these together, and pour on them a quart of boiling water; let it stand eight hours, then strain it off fine, and add to the liquor, of saffron wine, one ounce—of Mindinerus's spirit, three ounces. Mix, and administer as above. Two ounces of this infusion may also be taken every morning.

From thirty to forty drops of the antimonial wine may be added to each dose of the infusion; and during the time that the patient takes these medicines, his body should be well rubbed for half an hour every night and morning with a flesh-brush, or a coarse and warm dry flannel cloth, in order to procure a free perspiration; the patient should also use moderate exercise on horseback, or in a chaise if he is weak, to increase the motion of the fluids, and invigorate the solids: he must be careful to avoid exposing himself too suddenly to a cool air, or the damp moist air of the night, and he must be cautious in changing his linen, that what he puts on is perfectly dry.

If the acid humour affects the stomach with a burning heat and pain, and sour belchings, as it often does in this case, a dram of magnesia in a draught of milk and water, sweetened with a little sugar, and given in the morning, will correct the acidity, and carry it off by a gentle motion or two; and this may be repeated every third or fourth morning, as the acidity returns.

This course of medicines should be con-

tinued constantly, till it appears that the motion of the circulating fluids is sufficiently invigorated, and the patient has acquired a constant, regular, equal warmth, without it's being forced by exercise; and in order to obtain this desired end, it is generally necessary to add a small quantity of the chalybeat wine and a little Peruvian bark to the before mentioned warming and corroborating medicines, towards the latter end of the cure, and to continue the use of them till the patient has recovered his flesh, colour, and strength, and is perfectly restored to health; otherwise he will be subject to relapses, and the return of the disease will be more troublesome than the first attack.

But if the disorder has continued a long time before assistance has been called for, as is too frequently the case, so that the patient is much emaciated, and the diarrhoea has made frequent returns and has been of long continuance, and the patient has been reduced low, it will be absolutely necessary to repeat the small doses of ipecacuanha and the perspirative opiate several times at any stage of the disease, and particularly in case of the return of the diarrhoea, and strong and strengthening medicines to promote sweating must be constantly given afterwards, till this discharge is effectually checked; and if this is not effected, a free perspiration cannot be restored and continued, without both which no expectation can be formed of the patient's perfect recovery: and as it often happens that solid medicines are retained longer in the stomach and intestines than liquids, and will answer where the liquid will not; when the disease has proved obstinate, after giving ten or twelve small doses of the ipecacuanha as before, without it's producing the desired effect, the following electuary and decoction may be tried.

Take of the electuary of scordium, (water germander) one ounce—of Venice treacle, half an

an ounce—Japan earth, and the bark of pomegranate powdered, of each two drams—of cinnamon powdered, one dram—of precipitated sulphur of antimony, two scruples—of syrup of poppies, enough to make the whole into an electuary; of which the quantity of a large nutmeg may be taken morning and night, or oftener if the diarrhœa is urgent, drinking after it two ounces of the following decoction.

Take the pomegranate bark, and Virginian snake-root, of each one ounce—of cinnamon, two drams. Boil these ingredients in a quart of water till it is reduced to a pint; towards the end of the boiling, add one ounce of the electuary of scordium; boil it a little longer, then take it off, let it stand till it is cold, strain it, and add to the strained liquor, cinnamon water, and tincture of Japan earth, of each one ounce—of syrup of poppies, half an ounce. Mix well together: to be taken as above, and three or four spoonfuls may be also given after every loose stool.

The rubbing the body and the exercise of riding should be continued at the same time, and the other precautions observed.

Yet, if notwithstanding this management and the use of these medicines the diarrhœa proves obstinate, and it's returns are frequent, as is often the case in a disorder the changes of which are more various and the difficulty of cure greater than in most others, and if the patient's skin is still dry, so that he cannot be brought to perspire as freely as he ought; warm bathing, in some natural warm baths, and corroborating perspiratives at the same time, promise the best success.

It may possibly be objected, that warm bathing will relax the solids, already too much relaxed by the disease; but if the freedom of perspiration cannot be restored, the distemper will never be effectually cured, and though it may seem to abate for some time, yet it will often return again; and though many recover perfectly without warm bathing, yet with some no other method that can be tried will succeed; and if the patient's situa-

tion is such that he cannot go to any natural warm baths, or there should be none on the island where the patient resides, which is the case in Barbadoes, an artificial warm bath may be made of common sal martis, (or green copperas) sulphur vivum, some aromatics, and water made as warm as the natural warm baths at Bath in England, or elsewhere; and in this artificial bath the patient should be well rubbed whilst he remains in it: but this method cannot be expected to answer in all respects so well as the natural warm baths; to which the patient should have recourse if he can with any conveniency go to them, and particularly as they do not relax the vessels of the body in general (though they may have that effect on those which are on or near to the surface of it during the time the patient is actually in the bath) so much as the artificial baths do, notwithstanding the utmost care is taken that they are not made warmer; nor are those who bathe in the natural baths so subject to take cold after bathing, as those who bathe in the artificial ones; and it must be granted that the natural warm sulphureous baths of Bath, Aix-la-Chapelle, Barege, Aix in Provence, and those in Portugal, (and it is very probable that the warm baths in Jamaica, Nevis, and Carolina, if they were properly examined by fit experiments, would be found to be of the same nature, and in all respects as good as those above mentioned) greatly exceed all the warm baths that art can substitute; for here Nature is chymist, and her powers far excel those which the greatest artist or the ablest chymist can employ; besides, those who go to those natural warm baths, have the advantage of drinking their waters daily during the time of bathing, which answer the purpose of attenuating, diluting, and dissolving the acrid saline humours, and enabling at least some of them to be carried off by sweat and urine; and what is still of greater importance, by drinking those waters, the solids will be somewhat braced, and

and the circulation of the fluids increased, and consequently a more free and general perspiration obtained and continued. And though warm bathing may, as has been already observed, be objected to, as tending to relax the solids for a time, yet as it must be allowed to contribute to the cleansing the obstructed mouths of the perspiratory pores and the passages of the sweat, and gently relaxes the coats of those obstructed vessels on the surface of the body, whilst the heat of the bath increases the motion of the circulating fluids at the same time, they must, by thus jointly acting together, more effectually remove the obstructing cause, and carry it out of the small vessels, since relaxing the coats of those small vessels will have the same effect as increasing their diameters, and the motion of the blood being increased by the heat of the bath, this must certainly be the most effectual method to remove such obstructions; and Nature may be assisted in this work, by giving some such deobstruent perspirative draught as the following, half an hour before the patient goes into the bath.

Take of Virginian snake-root, from half a dram to a dram—of Venice treacle, half a dram. Mix the ingredients, and pour on them as much boiling water as will strain off to one ounce and half; let it stand to grow cold, and when strained, add to the liquor, of diuretic salt, one scruple—of Mindinerus's spirit, three drams—of saffron wine, two drams—of syrup of saffron, two drams. Make a draught, to be taken as above.

The patient's body should also be very well rubbed, both when he is in and after he comes out of the bath; and he should then immediately go into a warm bed, and encourage a free perspiration, and moderate sweating, by drinking warm Bath water; and the corroborating perspirative medicines before advised may be continued with the Bath waters, during the intervals between the

times of going into the bath, in order to brace up and strengthen the internal relaxed weak vessels, increase the motion of the fluids, and enable nature to cast out the humours from the internal parts to the surface of the body, that they may be carried off by perspiration in their natural way; and though warm bathing may in some measure relax the vessels on and near the surface of the body, yet it does not materially affect the larger internal vessels which are not exposed to it, so much as is sometimes apprehended; but going into the baths with too great fulness of the vessels will undoubtedly do much hurt, and want of prudence in this particular may have brought bathing into some discredit, and occasioned the disuse of it.

As to the use of gargles in this case, they are but of little service, except healing ones when the mouth is very sore; all others serve only to repel the humours from thence to the stomach and bowels, to which they are but too often translated without such assistance, where they produce a diarrhoea, which is most difficult to be cured, and where the strongest restringents without perspiratives will at the best only stop it for a little time, and it will either upon taking a little cold, or the least irregularity, return again: it will be necessary, therefore, to advise the patients, especially when they cannot resort to the baths, to use the restringent perspirative medicines above prescribed, at least once or twice a day, for some time after the diarrhoea is totally stopped, in order to strengthen the tones of the stomach and bowels, as well as to invigorate the motion of the circulating fluids, and restore and establish a free perspiration; and for the same purposes, towards the latter end of the cure, some chalybeats may be added, which will very much contribute to the desired end of a perfect and lasting recovery.

C H A P. XI.

Of the Nyctalopia, or Night Blindness of the West Indies.

THIS is a disease which is so prevalent among the negroes in this warm part of the globe, as well as in Africa, that it may be justly deemed an indigenous or endemial disease in the torrid zone, though it is but very seldom observable in England or in the other parts of Europe; it is now so frequent among the negro slaves in the West India islands, that six, eight, ten, or twelve negroes, in some estates, are attacked by it when the night comes on, so that the other negroes who can see well are obliged to lead them home; yet as long as the sun is above the horizon, they are as capable of distinguishing objects plainly as the others, but as soon as it goes down their sight begins to grow dim, and as the darkness of the night approaches that dimness increases, and they become perfectly dark and blind; and this blindness continues till the morning when the sun begins to rise, at which time their sight returns and continues till night, when they become blind again; and thus they continue to be blind in the nights and to see in the days for a long time, if not relieved by proper remedies: sometimes some of them will recover their sight for several nights, and then lose it again, and so repeatedly.

It has not been observed that the variations of the weather have any influence or effect on this disease, either in producing, increasing, or abating it, only that a continued clear, dry, hot season, has some little effect on those who are subject to it.

This night blindness comes on in the evenings after the sun sets, with a misty dimness, gradually increasing as the night approaches till it becomes dark, when the sight becomes perfectly dark also, and that without any pain either in the head or eyes, or elsewhere; sometimes a sense of fulness

in the head, and a small tingling in the ears attends it, and at other times not, but without any swimming or giddiness, or any oppression or sickness at the stomach, loss of appetite, or any other complaint but the loss of sight; all the secretions and other functions of life appear to be performed with due regularity, nor do the eyes seem to be impaired or altered; the cornea or first coat of the eye, and pupil or sight, appear perfectly clear and well, and the iris or second coat also continues to contract a little in the day time, and dilate as usual in the night, yet no vision is then performed, nor does there appear to be any flux of humours to, or any signs of inflammation in the eyes.

As no external injury or impediment in the eye appears, the cause of this disorder must be internal; and as no pain or any sign of inflammation attends it, it cannot be supposed to proceed from any obstruction of the vessels, through which either the blood or fluids circulate; it must therefore arise from some indisposition of the inner surface of the eye or optic nerves, or both; and as this is a disease which is most common within the torrid zone, where the reflections of the rays of light are strong and vigorous, and the sun being several hours every day almost perpendicular over the heads of the inhabitants; the angle of reflection is very acute, and the rays of light must be strongly reflected from the earth and other bodies into the eyes, and consequently the sensation of them, and the vibrations of the inner surfaces and the optic nerves, must be proportionably great; and being thus accustomed to such continued strong vibrations, they become weak, and their tones are impaired, so that they grow insensible to the small weak vibrations of the

the few inactive rays of light which exist in the night, and move with a force almost infinitely less than those of the day in these climates; and when this happens to such eyes as have a natural imbecility in the formation of their nerves, by the strong continued vibrations of the day-light they become in some degree paralytic, so that they remain blind till the sun returns in the morning, and renews the stronger vibrations of light again, when their sight is restored.

This seems to be the cause of the disease, and the most rational and satisfactory way of accounting for it, together with all its symptoms and appearances, in a plain and simple manner.

The *hemeralopia* is a disease which is very seldom met with; those who are subject to this disorder see tolerably well in the night, but very little in the day, and not at all when the sun shines bright; and this indisposition of the eye proceeds from a different and directly contrary cause to the other; that is to say, from too great a tenderness and sensibility of the external or internal coats, though this complaint is also unattended with any degree of inflammation. These patients can dilate the pupil of the eye, and see well in the night; but this is a very uncommon disease.

The methods of cure which have been used in the *nyctalopia* are various, but little

has been said of the cure of the *hemeralopia*, as it is so very seldom seen.

From the periodical return of the first mentioned disease with the darkness of the night, some have supposed it to be of the intermitting kind, and therefore thought it should be treated as such; but the periodical returns of this disorder are solely owing to the periodical returns of the darkness of the night, and not to any thing in the disposition of the disease; and the Peruvian bark may prove more injurious to the patient's constitution in some other respects, especially as it appears, that the methods which are prejudicial in intermitting fevers, and add to the violence of these disorders, contribute greatly to the cure of this disease, in which bleeding once to a greater or less quantity, as the patient's habit is more or less full, and purging twice or three times with some cooling and attenuating medicine, and giving the wild valerian root in powder, together with the volatile tincture of it, two or three times a day in the intermediate days, and for two or three days after the last purge, generally removes the disease, and restores the patient to his perfect sight.

The following collyrium hath been recommended to assist the cure.

Take of rose water, one ounce and half—of antimonial wine, half an ounce. Mix; and with this collyrium wash the eyes every morning, and at night going to rest.

CHAP. XII.

Of the Elephantiasis of the West Indies.

THE *elephantiasis* is also a disease indigenous or endemial to such countries as are within the torrid zone.

The patient when apparently in perfect health, and without any preceding discoverable cause, is first seized with a cold shi-

vering like the fit of an ague, which continues one, two, or three hours, with acute pain in the head and back, a sickness at his stomach, and sometimes a vomiting, and great pains in one of the groins, sometimes in the right and in other cases in the left, but

but never in both; and whether it falls on the right or left the first time, it generally continues from twenty to forty-eight hours, and sometimes longer; the patient is often delirious, the pain in the groin increases, and it swells and becomes red and hard, but rarely or ever suppurates: soon after it is thus swelled, a red stroke appears running down the thigh from the tumified gland of the groin to the leg, almost an inch broad, and of a fresh colour; and now the leg begins to swell, and is much inflamed, and as the inflammation of that part increases, the general fever abates, and most commonly in four or five days time, sometimes sooner, at other times later, goes entirely off; and in this time the swelling of the groin subsides, and is reduced to it's natural state: by this imperfect crisis the diseased matter is thrown on the leg, which continues to be much inflamed and swelled for several days, and then both these symptoms go gradually quite off, and the patient seems to be perfectly well again. This fever makes frequent returns with all the same symptoms, and in the same manner, at no certain periods; sometimes twice, thrice, or four times in a year, especially in the first two or three years of the disease; in others, once a month or three weeks, or oftener; and instances have occurred where the fever hath approached and disappeared four times in eleven or twelve days; and the periods of it's return are so uncertain, that it will sometimes happen, at two or three weeks end, and the next time not till three, four, or six months after; but whenever it returns; the same leg is affected as at first, and the other remains undisturbed. After each return of the fever the swelling of the leg continues longer than it did in the preceding fit; and after several returns the swelling remains after the inflammation is entirely gone off, and now it begins to appear as if it was anasarcaous or dropical, only that the swelling does not retain the impression of the finger so much or so long as it will in a case of that sort.

By these frequent returns of the fever the leg is each time more and more swelled, and the blood-vessels are distended, the veins become varicose or full of knots or protuberances and the swelling extends downwards from the knee to the extremities of the toes; the skin of that leg begins to grow rough and rugged; the swelling still increases, and the cellular membrane becomes very thick, hard, and callous, or even in some places approaching to be cartilaginous; the skin grows thicker and scaly, with great fissures and chops upon it's surface; nor do these seeming scales dry up and fall off, but adhere fast, and are daily increased and protruded by the augmenting thickness of the cellular membrane, and the leg and foot are thus gradually enlarged to an enormous and unnatural bulk, and at length the leg, in size, shape, and all other external appearance, resembles exactly the leg of an elephant, from which circumstance the disease takes it's name.

In this condition the patient may continue many years; some have lived above twenty years with a leg of this monstrous magnitude, and that too without any change either in their appetite or digestion, except during the returns of the fever; and all their secretions and functions of life have been at all other times regularly performed, as if in perfect health, nor have the patients themselves been sensible of any other inconveniency but that of carrying about with them such a troublesome load of leg. This disease and bulk of leg is, as we have already observed, generally confined to one of them, though it is said that there are some very few instances where it has affected both at the same time.

As this disease is solely produced by the fever above described, taking off that fever must consequently prevent the disease if proper methods are used before the humours are fixed in the leg.

Though this fever is very uncertain in it's intermissions, and irregular in it's periods,

riods, yet it is very plainly of the intermitting kind, and does not appear to have been yet described by any author, though the ancients have mentioned a seventh-day fever as an intermittent, whose periodical returns were said to be regular, but none of any longer intermission; besides the manner of this fever's going off, by an imperfect crisis as above, is singular and peculiar to itself; and under these considerations the following methods of treatment, both for the prevention and cure of this disease have been recommended.

When the shivering and fever has seized the patient, and one of his groins or inguinal glands is inflamed, swelled, hard, and painful, and the red streak from it down the thigh to the leg appears, which are the invariable symptoms of the approach of this disease, and distinguish it from all other fevers, though the patient should be very hot, and the fever pretty high, his pulse quick, full, but soft, and though he should be somewhat delirious, bleeding is not to be advised, as it hinders Nature from critically discharging the morbid humour upon the leg, and sometimes turns it upon the vital parts, where it proves fatal; but in some particular full and sanguine habits, where the fever is very high, the pulse rapid, strong, full, and hard, and delirium runs high, ten or twelve ounces of blood may be taken away, but not without great caution and the exercise of proper judgment.

But whether bleeding be thought necessary or not, if the patient has great sickness at his stomach, with vomiting, or much retching to vomit, it is necessary to encourage this discharge by drinking green tea, camomile-flower tea, or warm water, and sometimes to assist it by giving from one dram to two of ipecacuanha wine in the draughts of these infusions, as it is not improbable that these vomitings are efforts of Nature to throw off some of the diseased matter in that way; however, the action of vomiting will assist her to rid the vital parts

of it, and cast it off upon the leg more effectually and speedily: after the operation of vomiting, an anodyne perspirative bolus may be given with a little rhubarb, which will procure a motion or two, and may afford farther help towards discharging the offending humours; for this purpose—

Take of rhubarb powdered, one scruple—of the saponaceous pill, seven grains—of camphire, five grains—of diuretic salt, one scruple—of syrup of poppies, enough to make the bolus. To be taken as above, drinking warm white wine whey after it freely, to promote the perspiration.

For it is necessary to encourage a profuse sweating, and to continue it by giving some saline draughts after, and diluting plentifully with small white wine whey or sage tea, as they tend to abate the violence of the fever by cooling and sweating, and also assist nature to cast off the diseased matter both in this way and in her natural channel upon the leg. But if the patient, either from too great natural weakness, or by having been bled too freely, is too much sunk, and the pulse is too weak and low, though still quick, cordial and volatile medicines must be added to those above prescribed; and if the floating humours should affect the head, the legs and feet should be bathed in a warm decoction of the *viburnum*, or black sage of the West Indies; and blisters must be applied to the leg usually affected, in order if possible to draw the offending humour down, which may otherwise produce fatal consequences.

But it may be proper also to observe, that though the matter usually falls on the groin, and from thence into one of the legs, as we have before described, yet some instances have occurred where the arm has been affected; and in some very particular cases it has shewn itself upon the upper part of the head, the ears, the back part of the neck, the lower part of the spine of the back, and about the region of the

loins, these parts having severally assumed the same appearance as is usual in the leg after each return of the fever, and exactly the same symptoms have attended as when it has descended to the leg; and which ever limb is first affected, the returns are always to the same part of the body.

When the swelling and inflammation of the leg, or other diseased part, is very severe and troublesome, a fomentation of the following kind may be prescribed.

Take of the leaves of *alcea*, or yellow marsh mallow, and of *viburnum*, or black sage of the West Indies, of each three handfuls—the leaves of sage, and the flowers of elder, of each one handful—of Venetian soap, half an ounce—of crude sal ammoniac, one ounce. Mix and boil these ingredients in five pints of water, and add to the decoction rum and common vinegar, of each half a pint.

After the fever is entirely gone off, it may be proper to give an emetic, to remove any foulness that may remain on the stomach after the former vomiting; and after the emetic, and before the return of the fever, the following medicines may be administered.

Take of precipitated sulphur of antimony, two scruples and half—of calcined quicksilver powdered, half a scruple—of gum guaiacum powdered, two scruples—of balsam of Peru, enough to make the whole into forty pills; of which the patient may take four every night at going to rest, drinking after it them three ounces of the following decoction.

Take of the roots of sarsaparilla, two ounces—of sassafras, one ounce—of Virginian snake-root, half an ounce—of diuretic salt, half an ounce. Boil the whole in three pints of water till it is reduced to a quart, then strain it off, and add to the strained decoction, of sweet spirit of nitre, one ounce—of common juniper water, two ounces. Mix, and give as above: the same quantity may also be taken every morning.

These medicines having been taken some time, and the swelling and inflammation of the leg or other diseased part being entirely gone off, it will be proper to give small doses of the Peruvian bark in substance, and in such quantities at a time as the patient's stomach will bear, every three hours, washing down each dose with a tea-cupful of camomile tea, in which from forty to fifty drops of the elixir of vitriol hath been mixed; and this course should be continued till the patient hath taken from one ounce and half to two ounces of the bark, according to circumstances; and then this medicine may be omitted for ten days, at the end of which time another ounce of the bark may be given in different doses, and washed down in the same way; and a month after the same may be repeated, in order to guard against the return of the disorder, an intent which will be considerably forwarded by the patient's bathing in the sea or cold bath twice or thrice a week, and continuing it for a month or two after the disease hath totally disappeared and ceased to return: and these methods, strictly followed, seldom fail to remove the fever, prevent its return, and drive off the elephantiasis.

But in these climates, where the animal solids are relaxed by the intense heats, and it is no easy matter to prevail on the inhabitants to use the cold bath, or even to take regularly the medicines which are prescribed, this disease is very apt to return, especially where it has been suffered to proceed for a considerable length of time before any attempts were made to give relief; and those relapses are generally more difficult of cure than the original attack: and where the patient is of a weak, relaxed habit of body, endeavours should be used to induce him to repeat the alterative medicines once, and the bark after it, in the months of April and November of the succeeding spring and autumn.

And by these means the returns of this disease

disease may be in most cases averted, and the seeds of the disorder effectually eradicated; and easy as is the course we have recommended, it seems astonishing that it should ever be neglected, or that, to avoid a compliance with rules so simple and so little severe, men should suffer a disease to gain ground, which can at best end only in amputation of the limb, though more probably in the patient's death.

And even amputation, dreadful as that expedient is, will by no means certainly secure the unhappy patient from danger; for unless the fever is also removed, the returns of it frequently throw the matter on the other leg, and the unfortunate sufferer finds that he has lost his limb without getting rid of his disease, and must go through the difficulties he has at such a price avoided, in order to prevent it from seizing other parts; though at this stage of the disorder it is matter of great doubt whether any en-

deavours that can be used will prove successful.

Indeed, ideas have sometimes prevailed of keeping open the stump of the amputated limb, and endeavouring to draw off the humours that way, so as to prevent their being thrown on any other part; but this at the utmost is but a very uncertain project, though in such a case every thing ought to be tried.

Attempts have also been very frequently made to reduce the leg without being obliged to have recourse to amputation; and to this end bandages, frictions, fomentations, and mercurial unctions, have been repeatedly used, but without the smallest prospect of success in any single instance; for when it is grown to such an enormous size, and the membranes are become so hard and callous, external applications will answer no other purpose than to teaze and torment the patient without affording him the least assistance.

C H A P. XII.

Of the Vena Medinenfis, or Guinea Worm, of the West Indies.

THIS disorder hath also been called *nervous medinenfis* and *dracunculus*, and has been denominated the *Guinea worm*, because the negroes from the coast of Africa are subject to it, and frequently bring it in their legs to the West India islands.

Though this appearance has from it's resemblance been called a nerve or vein, yet it is really a worm of a white colour, except the head, which is blackish; it's shape is round, long, small, and uniform, like a nerve, or a piece of white round bobbin, and not broad and flat, as it has been sometimes represented. It is most commonly found lodged in the legs or thighs, though sometimes in other parts of the body, in

or immediately under the cellular membrane, or where that membrane expands itself between the muscles, where it insinuates itself and is extended to a great length, being usually from one to two feet and a half long. It does not cause much pain till near the time that it is ready to come out, when the part where the head of the worm is situated begins to swell, throb, and be inflamed and painful, like a small boil. When this boil breaks, the head of the worm, which is of a blackish colour, is thrust out at first, and soon after more of it comes forth and hangs down the leg, till it is extracted in the manner which we shall describe hereafter.

This

This disease proceeds chiefly from drinking the water of stagnated ponds in hot countries, after droughts and sultry hot seasons, wherein the eggs of this worm, or the minute and newly animated breed of it, are contained: it is frequent in Arabia, Persia, and the East and West India islands, where there are some stagnate waters, by drinking or bathing in which this worm is commonly generated.

In the cure of this disease it has been advised to give aloetics, to hasten the protrusion and exclusion of the worms; when the little tumors where the head of the worms are begin to appear and swell, the suppuration should be forwarded with cataplasms or other applications, and when the tumors break, the end of the worm being thrust out, it may be tied to a piece of lead, made in a long form, and about half a dram in weight, that the worm may not contract and draw itself in again; round this piece of lead a little of it should be rolled every day till it is entirely extracted; but the surgeons in the West Indies use a small piece of silk, cotton, or lint, instead of the lead, about which they roll daily an inch or more of the worm at a time till it is all extracted; taking great care not to break the worm, which is a very necessary caution; for if it is broken, it is exceeding difficult, and sometimes impossible, to recover the end again; in which case an abscess, or rather many abscesses will be formed, not only at the place of the worm's appearance, but all along the whole winding channel where the dead putrified worm remains, which sometimes degenerate into bad ulcers, and give the patient much trouble and a great deal of pain.

Giving aloetics, or rather worm-medicines, to dislodge and hasten the extraction of these animals, is unquestionably useful; but as these medicines act more immediately on the first passages than the fleshy parts and surface of the body, the following coarse composition has been found to be much more efficacious.

Take quicksilver, and the root of garlic, of each one ounce—of black pepper, half an ounce—of camphire, two drams. Infuse these a few days in a quart of common spirit of wine or brandy; strain it off, and of this infusion let the patient take from one spoonful to two, according to age and constitution, two or three times a day.

The subtle, volatile, pungent parts of this, composition so stimulate and affect these worms, that they generally endeavour to make their escapes, and draw themselves towards the surface of the body for that purpose, where a small tumor forms under the skin, in which they collect, coil themselves up, and die; and the tumor being opened they are easily taken out whole; and not only the worm which first appeared, but all the other worms of the same sort which are in the body, do the same, and may be taken out in the same manner where they appear; and where the worms are thus taken out, the places from whence they were extracted, being not much more than skin-deep, soon heal up with the assistance of any common digestive, and no farther uneasiness remains, but the patient enjoys as good a state of health as he did before.

C H A P. XIII.

Of the Leprosy of the Arabians, in the West Indies.

THIS dreadful disease was first brought to the sugar islands by the negroes from Africa, and is undoubtedly a native of that quarter of the world, as well as of Arabia, and is not an original disease of this western part of it; nor was it ever known here before the importation of negroes, among whom it is now too frequent in the West India islands, and has made it's way into many families of white people also: nor are there any effectual means to prevent it, but by such restrictions on the communication with the sick, as are much more easily advised than followed.

This terrible disease generally seizes the patient gradually, slowly, and in a manner insensibly, at a time when he seems to be in perfect health, without sickness, pain, or any uneasiness; nay, often without the patient's knowing that he is indisposed, till an observation is made, most probably by some other person, that numerous spots begin to appear in various parts of his body. These spots are at first of a yellowish brown colour, and soon after begin to turn to a kind of brownish purple in white people, and to a copper colour in the negroes; and they usually first appear on the forehead and chin, and continue to increase by degrees, both in number and magnitude, for many weeks, or even months, the patient still remaining unconscious of any disease: and as these spots increase, the skin on and near those places begins to thicken in different parts unequally, and then grows strait, rough, and full of hard scales, especially on the face, arms, and legs, with a numbness and difficulty of moving the fingers and toes. These scales are not like those of the disease which has been called the leprosy of the Greeks, nor do they drop off

like the scales of that disorder; in this, the hairs on all the parts of the body gradually fall off and become thinner, the breathing by degrees grows difficult, and the voice hollow, guttural, and a little hoarse; the breath is also continually foetid and offensive; the lobes of the ears become thick and full of knots; the cheeks large, and sometimes full of small tumours, as are also the forehead and eye-brows; the chin is dilated, and all these parts become of a livid reddish colour; the urine is thick and foul, like that of cattle; the mind is also agitated, and the sleep disturbed with frightful dreams, like those who are melancholy; and some are suddenly awaked out of their rest by a kind of suffocation, which comes on them so suddenly and violently, that they are obliged to leap out of bed. All who labour under this disease have frequent and strong dispositions to venery. Knotty veins of a blackish colour, and warts or knotty pustules, are observed to rise about the root of the tongue, under the eye-lids, and behind the ears. All these symptoms gradually and slowly increase, and grow worse as the disease advances, and the body becomes lean and deformed; while the face, calves of the legs, and the feet swell, and the latter are most commonly cold and numbed. Thus the disease continues to gain ground many years; when the nostrils or lower parts of the nose become thick and full of small tumours, the cartilage which divides it is corroded and wasted away, or falls down, and the whole figure of that feature becomes thick and flat, so that the nostrils are in a great measure obstructed, and the patient's voice is still more hollow, and seems to proceed from the belly: at this time the lips grow thick, and are turned out; the eyes are

preternaturally round at their internal angles, and the whites of them become yellowish, thick, and hard, almost like the nails of the fingers. When the disease has continued long, so that the eye-brows and eye-lids are grown thick, hard, and callous, the hairs fall quite off from them, as well as from the chin, and are replaced by a few others, but much more thinly scattered; the ears at last become sharp at the lower extremities, and are drawn down and partly eaten away; the fingers and toes are greatly swelled, and crack with dry fissures, and are sometimes so puffed up, that they seem to have totally lost their natural forms; the muscles are wasted all over the body; and the face is so disfigured, with such tumours and knots as have been before described, that it appears horribly deformed, so as to have been compared by the ancients to the fancied likeness of a satyr, or to the face of a lion: from which imaginations they gave this disease the names of *satyriasm* and *leontiasm*. And now, when the disease is arrived at it's last stage, the voice is exceeding hollow, virulent ulcers affect the hands and feet, and sometimes some other parts of the body, and the skin and part of the flesh on the feet is entirely deprived of all sensation, so that if you pierce them with a needle, or scald them with boiling water, or even apply a red-hot iron to them, they are not sensible of any pain; and at last the humours all become so very acrid, that a small fever arises, which soon carries off the miserable patient.

These are the general symptoms which attend this loathsome disease; not that every patient who labours under it has every one of these symptoms, but some have more and others have fewer of them, though in general they have much the greater part of them sooner or later; and in this wretched condition they are often doomed to drag on a life of misery even for a number of years. How happy are the inhabitants of such a climate as that of England; where this dis-

ease, and several others equally dreadful and fatal, are altogether unknown!

From the strictest enquiry, and the most accurate examination of the symptoms and nature of this disease, as also from anatomical dissections, it appears, that the cellular membrane is the seat of it, which membrane it follows almost into every part of the body, even into the very bones, some parts of which are swelled, hardened, and rendered useless by it; whilst it corrodes, consumes, and eats away other parts, especially the cartilages, and sometimes the very bones themselves, when it becomes inveterate.

Hence it appears, that when the disease has continued a long time, and the humours are rendered so acrid as to corrode the bones, and almost destroy the human frame, no remedies whatever can possibly cure it.

But if the disease be taken in time, that is to say, at the beginning and first appearance of the primary symptoms, which are the spots above mentioned, we have sufficient reason to believe it may be cured; and, indeed, there have been many instances of it.

And notwithstanding the seat of the venereal disease is allowed to be chiefly in the expansions of the cellular membrane, as well as the disorder of which we now treat; yet it appears from experience, that the methods of treatment and the means of cure, must be totally different. For the venereal disease, mercury is almost in every case prescribed with success; but in this species of leprosy, it is so far from being beneficial, that it cannot be used at all without bringing on danger, and aggravating every symptom, at least after a while; for the disorder seems at first to yield to mercurial medicines, though it returns with redoubled violence: but; on the contrary, antimonials, the best preparations of which are known to be little efficacious in the removal of venereal taints, are found to be the

the best medicines which can possibly be given in the disease now before us.

When the spots which we have described first appear, either of a brown, yellowish, or purple colour, they should be carefully inspected, to ascertain whether they are really the symptoms of this particular disorder, or such other spots as sometimes appear on the skin in this climate without being of any material consequence; and having ascertained the nature of these appearances, these spots may be anointed gently with a little of the oil of tartar, procured *per deliquium*, or by solution in the air, which should be soon after wiped clean off, not suffering it to remain long on the spot: if after this the spots disappear without returning again, they are not leprous spots; but if they remain without being materially affected by this application, though the patient may be well in all other respects, and may remain so for months after, yet there is no doubt but the spots are of the leprous kind, and the cure should be immediately attempted before the disease gains farther ground, for the only probability of it's being effectually removed is by taking it in the very early stages.

If the patient is of a full and sanguine habit, it will be necessary to take away twelve or fourteen ounces of blood; after which a vomit of emetic tartar should be given, to be worked off with moderate draughts of camomile tea.

The patient may then begin a course of the following medicines, which should be persisted in for a considerable length of time.

Take of the precipitated sulphur of antimony, three drams—of calcined quicksilver finely powdered, thirty grains—of gum guaiacum powdered, three drams—of oil of saffras, twenty drops—of balsam of guaiacum, as much as will make the whole into a mass; which may be divided into ninety pills, three of which are to be taken every night at going to rest, drinking after each dose fifty drops of the following tincture, in three ounces of the decoction hereafter prescribed.

The tincture.

Take of antimonial wine, two ounces—of aromatic tincture, half an ounce. Mix, and take as above.

The decoction.

Take of the roots of sarsaparilla, three ounces—of the bark of saffras, one ounce. To these add three pints of water, and boil it till it is reduced to a quart; let it stand till cold, then strain it off, and add to the strained liquor, of tincture of antimony, one ounce—of compound juniper water, one ounce and half—of sugar, enough to make it palatable. Mix for a decoction, to be taken as above. Three ounces of it may also be taken every morning with fifty drops of the above tincture.

And these medicines must be continued regularly for two or three months, or longer, if the spots do not entirely disappear sooner, for the patient should persevere in the use of them for some time after they are quite gone off: and during this course of medicines the spots should be well rubbed once or twice a day with a warm flannel cloth, which has been first held over the fumes of burning sulphur with which a little antimony hath been mingled.

If the disease does not abate, and the spots, deadness, and numbness, remain undiminished; it is sometimes necessary to repeat the antimonial vomit two or three times during this course; especially when the disease is hereditary, or proves very obstinate: and it may be necessary also to repeat the whole course over again two or three months after the disorder seems to be in a great measure conquered; in the next spring or autumn, however, or both, if the least symptoms then appear, as no disease is more obstinate or difficult to cure. And as the infectious matter, especially when it is hereditary, is apt to lay dormant without shewing any symptoms or remains of the disease for a whole year,

year, or sometimes even years, and then breaks out and shews it's malignity afresh, it is absolutely necessary to repeat this course of medicines in the spring and autumn of several succeeding years; for too much caution cannot be taken against so loathsome and dreadful a disease.

Or, instead of the exact course above prescribed, somewhat of the following kind may be given.

Take of crude antimony finely powdered, one ounce and half—of soluble tartar, diuretic salt, and prepared millepedes, or wood lice powdered, of each half an ounce—of preserved ginger, half an ounce—of syrup of sulphur, a quantity sufficient to make the whole into an electuary, of which the patient may take the size of a nutmeg night and morning; drinking after it the decoction and tincture above prescribed.

As to regimen, it is not only necessary that the patient should live temperately, but there are several things which are extremely hurtful in this disease, from which he must be restricted.

He must abstain totally from pork and hog-meat of every kind, and as much as possible from all fat meats, and every thing that is oily or greasy, and that not only during the course of the medicines, but for many years after the disease has disappeared; nor is it at any time adviseable for those who have been subject to this disease to indulge in these kinds of food.

Any other sorts of flesh meats, which are not fat, much salted, or high-seasoned, may be eaten freely at dinner; but they should be sauced with only their own gravy, and accompanied with plenty of vegetables: suppers of animal food should be avoided; and,

upon the whole, this part of the diet should be light, simple, and easily digested.

The patient should be extremely sparing in the use of wine or spirituous liquors of any kind; nor must any sort of malt liquor be admitted, all drinks of that composition being improper in hot countries, as they are too viscid and glutinous, and require more labour and exercise than can be well used in these climates to digest them; for, as the great heat occasions proportionable perspiration, these liquids are carried into the blood too soon, and in too crude a state, and often do much injury: small punch, moderately acid, is a much more proper beverage for hot climates. The breakfasts and suppers should be soft, mild, and diluting.

And however rigid and severe these rules may seem to be, they are absolutely necessary, if the patient is obliged to continue in a hot climate, and yet desires to recover his health, and live free from this dreadful disease. It is highly probable that removing into a colder climate may considerably contribute to his recovery, and to the re-establishment of his health; as is generally the case with diseases which are bred in a hot climate and occasioned in any degree by the temperature of the air.

By the methods above prescribed, this disease hath often been averted, and sometimes cured, when it was taken before it had been too far advanced, and too deeply rooted in the constitution, and before the whole mass of the fluids was too much contaminated: after it has been suffered to proceed without interruption, and the whole habit is vitiated, all the prescriptions that can be offered will fail of success.

C H A P. XIV.

Of the Leprosy of the Joints, in the West Indies.

THIS sort of leprosy, when it first appears, seizes the patient in the same manner, and with the same symptoms, as that which we have described in our last chapter, so that for a considerable time it remains doubtful which of the disorders it will prove to be; for in this distemper, also, when the patient thinks himself perfectly well, superficial spots of a yellow, brown, or copper colour, with a cast of purple in white people, and of a dark brown, or copper colour in negroes, first appear in different parts of the face, especially about the nose, and soon after on several parts of the body; at first without any uneasiness or roughness in the skin, or any sense of pain, and often without the patient's discovering any sort of indisposition, till the spots are mentioned and pointed out to him by others: these spots spread by slow degrees, and increase both in number and magnitude till they cover a considerable part of the body, and yet with very little uneasiness or pain; and thus they continue gradually and slowly to increase, for several months, and sometimes years, and then the fingers and toes begin to be numbed, and gradually but slowly to swell, especially at their ends, and the nails are curved inwards, which appearances plainly prove it to be this kind of leprosy. And all these symptoms become more aggravated by slow degrees, till the fingers and toes begin to ulcerate. The ulcers are very small, never digest, nor are much inflamed, but generally look dry, without much foulness or matter; but they gradually creep on from one joint to another, and corrode the ligaments, tendons, nerves, and all the vessels to the very bones, but without any considerable degree of pain,

all the parts being benumbed, and almost deprived of sensation: and one joint being by this means in a manner separated from the limb, soon drops off, and the ulcers creep on to the next; and so on, till all the fingers and toes are corroded and fallen off; it then attacks the joints of the next set of bones, either of the hands or feet, but before it has corroded all those, it seizes the trunk of the body also, and breaks out into small ulcers, with dry scabs in the arms, legs, and most parts of the body. And now the distemper becomes infectious, if it was not so before; which is so doubtful a matter, that the dangers of contagion should be carefully guarded against from the first ulceration. These small ulcers never penetrate deep into the muscular flesh of the body, but spread and extend themselves on the surface in the cellular membrane, and discharge a little thin, acrid humour, which dries up into scaly scabs, and emaciates the patient away, sometimes in two or three years time, but it is often much longer before it puts an end to his miserable life; there are even instances of patients who have struggled with this loathsome disease for ten or fifteen years, or more, the symptoms continuing to increase, but so slowly that their only hope of relief hath appeared too distant.

The method of cure in this must be the same as in the other kind of leprosy; for it is equally remarkable in both, that all mercurials, however prepared (except the calcined quicksilver, given in small doses as an alterative, with antimonials, as before) greatly aggravate all the symptoms, and increase the disease: if the disorder is taken in time, at it's first appearance, and treated with antimonials in the same manner as in

the other leprosy, great hopes may be entertained of a happy recovery; but when the disease is hereditary, and derived from parents, or has been neglected too long, till the joints have begun to fall off, and all the

fluids are corrupted and infected, no remedies yet known, however powerful and efficacious, will prevail against this cruel disease.

CH A P. XV.

Of the Yaws, in the West Indies.

THAT disease which the negroes in Africa, and the inhabitants of the West Indies, from them, call the *yaws*, is a native of that quarter of the world, and indigenous there and in Arabia; from the former it was first brought by the negroes into America and it's islands.

This is a distemper which has been well known for many ages in Africa, and some of it's neighbouring countries which are situated within the torrid zone.

We are credibly informed, that the yaws seldom fail to attack the negroes in Africa at one time or other of their lives, but that children and young people are most frequently affected with it; and that they very rarely or never have it a second time, if they have been perfectly cured the first, either in their native country, or by the negro doctors after they have been brought to the West Indies; for the negroes have by long observation and experience found out methods of curing this disease with the caustic juices of certain escharotic plants, externally applied, and giving the juice or decoctions of others internally, which they keep as a secret from the white people, but preserve among themselves by tradition, and with these juices they sometimes perform extraordinary cures both in this and some other diseases.

This disease generally makes it's first appearance without any previous sickness or pain, and when the patient thinks himself

perfectly well, in very small pimples, not bigger than the head of a small pin, which are smooth and level with the skin; these daily increase, and become protuberant pustules; soon after, the external skin turns whitish, cracks, and rubs off, and a very small quantity of a whey-like or clear humour issues, which dries and becomes white; but the pustules neither contain matter nor any considerable quantity of the thin humour, only a pretty thick white slough appears, and under that, pieces of a red fungous flesh thrust themselves out of the skin, which gradually increase to different magnitudes, some not so large as the smallest wood-strawberry, some larger, and others exceeding the size of the largest mulberry; which last they much resemble, being red, and composed of little round knobs as they are. These fungous excrescences appear indifferently on all the parts of the body, but most frequently and generally are the largest about the groin, private parts, fundament, under the arms, and in the face: and it is remarkable, that in general, when the yaws are very large, they are fewer in number; and that, on the contrary, when they are more numerous, they are generally smaller in size. As the yaws are thus increasing, and coming to their height, the black hairs which grow out of the places where the yaws are, gradually turn to be perfectly white, like the hair of an old man, and the humour which oozes out of the excrescences,

scences, drying upon the skin, makes that appear of a whitish colour also, and renders the patient disagreeable and loathsome to the sight. And now this disease is also very infectious to those who handle or cohabit with such as are afflicted with it.

All this time the patient neither loses his appetite, flesh, nor strength, and seems in all other respects to be in good health, being free from any pain or uneasiness, but what the disagreeable nastiness of the sores, and a little tenderness occasions; for they are not painful unless they are roughly touched or rubbed.

The time from the first appearance of this disease in the before mentioned small pimples, to the full height of it, is very different in different constitutions, as they are stronger or weaker, and according to the negroes being well fed, or the contrary: for, when the negro patient is lusty, strong, of a full habit, and has had plenty of good food, the yaws will often arrive at their full growth, and be as large as a mulberry in a month's time from their first appearance; but when he is weak, low in flesh, and poorly fed, the yaws will be small, and often no larger than a strawberry at the end of three months.

This disease is known to be infectious; but there is also a peculiar aptitude in some constitutions to receive it more readily than others; and there may probably be a disposition in the same person to receive the infection more readily at one time than at another, as has been observed of the small-pox.

The description we have given is that of the true natural appearance of the disease, when it is left intirely to nature, and is neither retarded nor hastened by medicines, nor altered by external applications; and it will continue in this state a long time without any material change, if it is wholly disregarded. Nor is it easy to guess what would be the consequence if it was suffered to proceed without any medical applications, as no case has ever been mentioned where no

endeavours were used, nor any attempts made to cure it; but it is most probable, that the funguses in the yaws would in time become such ulcers as would corrode and eat away the flesh, even to the bones, and then produce knots or knobs, exfoliations, and rottenness in them, and at last totally consume and destroy them, as it does when the disease is injudiciously treated, and the cure attempted without success: for when this is the case, and the patient has taken a considerable quantity of mercury, or has been salivated too soon in the disease, and especially by unction, before the morbid matter was sufficiently cast out to the surface of the body; or if the matter has been repelled by that or any other means, though the skin may have been sufficiently cleared by these methods; yet the distemper not being effectually eradicated and cured, it will return again, and then it becomes exceeding difficult to cure. And if it has made several of those returns, and has been repelled, and has at last broke out in malignant ulcers, and corroded the bones, it is too often incurable; but if the disease be judiciously treated at the first, it hardly ever proves dangerous, and the cure is very seldom attended with much difficulty.

There is a vile custom which prevails among the surgeons of the Guinea ships; that, upon the first appearance of the yaws, during their voyage from Guinea, they apply some strong repellants to them; such as the juice of roasted limes, mixed with the rust of iron and sulphur, or gunpowder; by which they drive back the diseased matter into the blood, where it's acrimony is increased, though their skins are rendered clean by it for a short time: they then rub them with palm-oil, which makes them soft, and look well, and in this state they are imposed upon the planters for sound, healthy negroes; but in a few days or weeks after they are purchased, the virulency of the diseased matter being increased by the retention, and the heat of the body, the

the yaws break out afresh, much worse than ever, and it is then very difficult, if not impossible, to cure the disorder.

As this disease proceeds from a peculiar kind of infectious matter, which is first generated in, and is indigenous to the hot climate of Africa; and which Nature, when she acts in the most salutiferous manner, always casts out on the surface of the body, when her operations are not obstructed by injudicious or ignorant practice; it consequently follows, that our endeavours to cure, should be first directed to assist Nature in the expulsion of the morbid matter to the surface of the body, that as much of it as possibly can, may be discharged that way; and then to destroy that part of it which cannot be so discharged, but remains lodged in the funguses and ulcers, together with those excrescences, by the use of proper escharotics.

As soon, therefore, as the pimples begin to appear, let the negro be confined in a house or room separate from any others; or if it is not yet certain, whether it be the yaws, or a sort of itch, which the negroes call in their language *crocrow*, as they much resemble each other at their first appearance, though they differ greatly soon after; let the negro be confined or separated for seven days, and then look on him again: and in this time it may most commonly be determined with certainty, whether it be the yaws or not; if it be, it will be necessary to give some such medicine as the following, to assist Nature in hastening the expulsion of the diseased matter, and bringing the yaws to their full growth.

Take of Æthiop's mineral, one ounce and half—of crude antimony powdered, one ounce—of Venice treacle, one ounce—of camphire powdered, one dram—of syrup of ginger, enough to make the whole into an electuary; of which the patient may take the quantity of a large nutmeg, night and morning, drinking after each dose a draught

of whey, with forty drops of the antimonial wine: and this medicine should be continued till the disorder is at the height.

And it may be certainly known that the yaws are arrived at their full height, when they are at a stand, and neither increasing in their number nor magnitude: and at this period it is a proper time to begin to give mercurials, to raise a spitting; which is much better done, in this disease, by giving calomel daily, than by unction, as there is some danger, that the latter may carry the diseased matter from the skin into the mass of blood again; neither is it prudent to apply any mercurial ointments to the yaws for the same reasons. But the best method is, to give five or six grains of calomel, twice a day, till a moderate salivation is raised, and the patient spits a pint and a half every twenty-four hours, and never to raise it higher; for few patients in this hot climate can bear the spitting to be raised so high, without danger of sinking under it, or bringing on some other bad symptoms. By the time that the salivation is raised to near a pint and half, the yaws are generally all covered over with dry scaly scabs, which then begin to fall off daily in white scurf or scales, and usually in ten or twelve days time more, leave the skin smooth, soft, and clean: and as soon as the scabs are fallen off, and the skin begins to cleanse, it will be proper to desist from giving any more mercury, and the salivation should be permitted to go off gradually of it's own accord; or if it continues too long, a dose of rhubarb, or some other gentle cathartic, will effectually check it.

It frequently happens, that after the yaws are in general gone off, and healed, and most part of the skin is become soft and clean, that one or more large yaws will still remain, and will continue to rise high, and appear red, knotted, and moist, discharging a little of the thin humour; this

is usually called the master-yaw, from it's being bigger than any of the rest: but it is by no means necessary to continue, or repeat the salivation, which is always attended with the worst consequence, to carry off these few excrescences; all that is required being to destroy those yaws so remaining, and all fungous flesh, with gentle escharotics; and then to heal and cicatrize the place with any common digestive.

Some use the lunar caustic, and some a solution of a dram of corrosive sublimate of mercury, in an ounce of rectified spirit of wine, and gently touch the remaining yaws with a feather dipped in this twice a day, till they are all consumed; and others prefer blue vitriol, or a mixture of one dram of red corrosive mercury, with half a dram of burnt allum powdered; and this last is the gentlest and safest application, and at the same time full as effectual as either of the others.

During the use of these escharotics, it is necessary that the patient should take something of the following nature, in order to expel any remaining diseased matter, as well as to prevent any of it being repelled into the blood, by those external applications, and to correct the acrimony of the humours, sweeten the blood, and restore the patients to perfect health.

Take of Æthiop's mineral, one ounce and half—of crude antimony powdered, one ounce—of Venice treacle, half an ounce—of gum guaiacum powdered, three drams—of common syrup, enough to make the whole into an electuary, of which the patient should take a quantity equal to the size of a large nutmeg night and morning, drinking after it a large tea-cupful of a decoction of the roots of sarsaparilla and saffrafras-wood, to each draught of which forty or fifty drops of the antimonial wine may be added.

The methods we have prescribed gene-

rally succeed, even in the most numerous and worst kind of yaws, provided they have not been tampered with, and the morbid matter too often, or too effectually repelled; or the disorder has not been mismanaged in other respects: but if after giving the first medicines, the yaws should not appear to be very numerous, or of a bad kind, and by their arriving at maturity early, it may be concluded, that the morbid humours are effectually expelled; giving these following medicines, and using the last escharotic powder as above, will commonly cure them effectually, without salivation.

Take of precipitated sulphur of antimony, two drams—of calcined quicksilver, reduced to a very fine powder, twenty-four grains—of gum guaiacum powdered, two drams—of camphire, half a dram—of balsam of gum guaiacum, enough to make the whole into a mass; which should be divided into seventy pills, three of which may be taken night and morning, drinking after each dose, the decoction of sarsaparilla-root and saffrafras-wood, with the antimonial wine as above prescribed.

It sometimes happens, that after the patient is cured, and all the yaws are entirely gone, and the skin, in every part of the body, except the soles of the feet, is perfectly soft, smooth, and sound, that tumours, or little hard swellings will remain on the parts last mentioned, which are painful, and so very sore, that the patients can neither stand up, nor walk, nor even bear them to be touched, without great pain. This proceeds from yaws rising on those parts, and the skin there being very hard, callous, and thick, from their going bare-foot, so that the excrescences cannot push through; but this is easily remedied by bathing the feet in warm water, and paring off the callous skin, after which the yaws will appear and push themselves out, when they may be soon destroyed by the above escharotic

rotic powder, and the place cured as in the matter-yaw.

But, as we have already observed, the worst circumstances attending this disease, arise from a wrong method of treating it; either by the use of strong repelling applications, or by too hastily giving mercurials, and bringing on a salivation, before nature has sufficiently expelled the morbid matter to the surface of the body, which is generally the case when she is not obstructed by wrong treatment and medicines, returning the morbid matter into the blood again; in which case it falls upon some other excretory passages, by which it never can be carried off, but is cast upon various parts of the body where it produces the most malignant kind of ulcers, which when they can be come at, are either exceeding difficult to cure, or are sometimes incurable; or if it falls upon the bones, brings on gnawings in the limbs, with violent nocturnal pains like those which attend the venereal disease; and at last produces nodes, enlargements, and rottenness of the bones, which are in time entirely eaten away, and the patient after continuing a long time, sometimes years, in this miserable condition, at last dies benumbed and insensible. This is a most deplorable case; but if it be taken when the external ulcers first appear, and before the pains in the bones, and other symptoms come on, it may sometimes be cured by the following method, which has been known to succeed when even a salivation has failed: though that may, indeed, be tried; but if it does not bring the ulcers to

digest and heal, it will be adviseable not to proceed farther, but to give the pills last above prescribed, by doses of three at a time night and morning, washing down each dose with the decoction of sarsaparilla and saffra, and the drops of antimonial wine, and aromatic tincture, as directed for the leprosy of Arabia.

The ulcers may be dressed with the following.

Take of yellow basilicon, one ounce—of red corrosive mercury, finely powdered, one dram—of burnt allum powdered, half a dram. Mix, for a digestive balsam.

And when the ulcers are clean and begin to heal, or tend to cicatrize, they may be dressed with the following, till they are perfectly healed and well.

Take of common plaster, with gums and red lead, of each half an ounce—of red corrosive mercury, two scruples—of burnt allum powdered, half a dram. Mix for a plaster.

But when the bones are affected with knobs, and are become rotten, and are in part eaten away; which most commonly happens to such bones as are of the most spongy nature, as those of the hands, fingers, feet, and toes, and the spine of the back and joints of the other bones, the case is incurable; nor will amputation avail, even when it is in the hands, feet, or in such parts where that operation can be performed; because the humour will soon fall upon some other parts, and produce the same effect.

CHAP. XI.

Of the Impetigo, or Ring-Worm, in the West-Indies.

THE *Impetigo*, is a disease of the skin, which was anciently well known to the physicians of Greece and Arabia, and is more or less common still in most other nations, though in the colder and more northern climates it is usually so mild, and

and so easily cured, that it is of very little consequence.

But it is so frequently met with in the West India islands, and in that part of the continent of America, which is situate within, or near the torrid zone, that it may be said to be indigenous to those climes, where it is a disease troublesome, disagreeable, painful, and difficult of cure.

Some of the first voyagers into this part of the world, found the original natives of these islands subject to a disease of the skin, which might be either this or another kind very much resembling it, and which the natives call a *cowrap*; and they have a tradition among themselves, that one of the seven people that were created when the world was first made, was a cowrap.

From this tradition we may conclude, that it is a disease almost as ancient among them as the race of mankind; but it does not appear that they had any of the diseases which are indigenous to Africa, and have been imported with the negroes from that quarter of the world to these western parts of it, though it is as warm here as in Africa.

This disease appears without any previous sickness, or pain in any part of the body, sometimes in one part, and sometimes in another; at first in many small pustules, or pimples, clustering together, most commonly in or very near a circular form, of the bigness of a sixpence or a shilling, of a reddish colour, and each pustule containing a small quantity of clear acrid saline water; but they soon spread, sometimes to be as large as the breadth of the hand, or broader, and itch most intolerably, especially upon the patient's putting off his cloaths at bed time, and that frequently to such a degree that human resolution is unable to restrain his hands from scratching, or rubbing the pimples briskly, which breaks the small pustules, and the acrid humour oozes out and occasions a heat and smarting, after which it dries upon the skin, and forms whitish scales or scabs, which fall off again upon

being rubbed or scratched, and are daily renewed in the same manner, with the same symptoms of itching: thus these eruptions increase and spread to various parts of the body; sometimes leaving one part of it, and removing to another, without any remedies being applied; and in this state the disease will continue for years, and probably would remain during the patient's life, if not relieved by proper remedies.

This is truly a disease of the skin, and is apprehended by some to be contagious, and probably may be so, in the most virulent state of it, and whether it arises from small worms somewhat different from those which cause the itch, or is occasioned by the heat of the climate, it produces the effects which we have before described; and when the disease is suffered to continue long, as it is sometimes for years, the humour discharged becomes so very acrid, that it corrodes the parts affected deeper, and expands them larger, and at last degenerates into a *herpes exidens*, the most corroding and virulent of all eruptive diseases, which is in truth only a more malignant degree of the impetigo.

And for the cure of this disorder mercury alone can be depended on; and though it has been suggested by some, that evacuations, such as bleeding and purging, may be necessary, before mercury is administered internally, or applied externally; yet unless a fullness of blood indicates a necessity for them, they are neither of any service in this nor in most other diseases of the skin; and purging may divert the mercurials from the surface, where they are intended to act, towards the intestines, and so become prejudicial.

If the disease is recent, and has neither continued long, nor spread much, nor the humours become very acrid, it is most commonly very easily cured, even with sulphur, either mixed with a little simple ointment, or with a plaster of diapalma applied to the parts affected; or if those parts are washed

washed with a lotion made of the root of white hellebore, and a small quantity of white vitrol infused in water, and a few doses of milk of sulphur taken inwardly at the time of using them, this course will probably be more effectual; but if the disease has been neglected, and has continued a long time, so that it is become inveterate, and the humour or water which is discharged is become very acrid and corrosive, or where it is degenerated into the *herpes exidens* as before described, it is difficult to be cured; and the application of ointments, lotions, or any repelling medicines externally, without giving proper internal medicines at the same time, may be attended with bad consequences; for some who have injudiciously made use of such repelling applications, have turned that acrid humour upon the bowels or lungs, or on the vital parts, where it has produced very fatal effects.

And though the slight prescription above-mentioned may cure this disease in some constitutions, and when it is moderate and recent; yet when it has been of long continuance, and the humour is become very acrid, and the constitution bad, remedies of a more powerful and active nature are required, and something of the following kind has been found successful.

Take of calcined quicksilver, finely powdered, one scruple—of precipitated sulphur of antimony, four or five scruples—of gum guaiacum, powdered, one dram—of balsam of guaiacum, as much as will make the whole into forty pills, of which the patient may take two every night at bed-time.

Take of antimonial wine, one ounce—of the aromatic tincture, half an ounce—Mix, and let the patient take sixty drops of it every morning, in a large tea-cupfull of the decoction of sarsaparilla-root.

And when the constitution of the patient is tolerably good, but the disease inveterate,

he may take the same draught and drops after the pills at night also; and after he has taken these medicines seven or eight days, he may begin to anoint the parts affected with the flowers of a shrub well known in the West-India islands by the name of the *French guava bush*, either whole as they grow, or reduced in a mortar to a fine pulp, every other night, till he has used it four or five times, and continue the use of the above pills and drops at the same time; and if any appearance of the spots remain or return, he may touch them with a very little of the ointment again, till they are perfectly well; and if these pills and drops move the belly more than once or twice a day, it will be right to give half a grain of opium, with each dose of the pills, or so much as may be found necessary to stop the purging, in order that they may be carried into the circulating fluids, and have their proper effects upon them, to correct and alter the acrid humours.

The Spaniards have prescribed as a nostrum for the cure of this disease, the *terra macke-mackee*; and the French have pretended to cure it with an infusion of the white hellebore-root, with a little alkaline salt in water, and a little milk added to disguise it; and several specifics of the like kinds have been strongly recommended by others; but they all in general prove ineffectual, except in a chance case, where the disease is moderate and recent.

However, it will be for the good of the public in these parts, to recommend the use of the flowers above prescribed, which are frequently found in those islands, and have been proved by repeated experience, to be much more effectual in the cure of this very troublesome, though seldom dangerous disorder, than any of the above-mentioned nostrums, and to have succeeded when the mercurials in various forms have failed, though the use of them should always be attended with the administration of the foregoing internal medicines.

C H A P. XII.

Of a Particular kind of Palsy, peculiar to the East Indies, called the Barbiers.

THE inhabitants of these countries are much afflicted with a troublesome disorder which they call the *Beriberii*, (a word signifying a *sheep*;) a denomination which it has probably received, because those who are seized with it, from a tottering of the knees, and a peculiar manner of walking, exhibit to the fancy, a representation of the gait of that animal. It is a species of palsy, or rather a tremor; for at the same time that it impairs the sensation of the feet and hands, and sometimes even of the whole body, it induces a trembling. The principal cause of this disease, is a thick, viscid, glutinous humour, which seizes the nerves in the night; when people, after being fatigued by the heat of the day, in those fervid climates, imprudently neglect to cover themselves with proper bed-cloaths; and it is peculiarly prevalent after a rainy season, which is constantly the state of the weather in this climate, from the beginning of November till May.

In this disorder, the limbs seem to be lengthened, rather than shortened, the phlegm insinuating itself into the joints, so as to relax the nerves and ligaments. In general, the disease approaches slowly; but upon a person's drinking a large draught of the milky liquor of the cocoa-nut, which, from it's very agreeable taste and cooling quality, is much esteemed in these countries, when he is heated, by labour or exercise, the attack of it sometimes follows suddenly; in the same manner as large draughts of small-beer, or other weak liquors, affect those in Europe, who take them when they are heated by running, or any other violent exercise, with diseases which are frequently productive of the extreme danger.

The chief symptoms of this disease are, a lassitude of the whole body; the motion and sensation, especially of the feet and hands, are languid and depraved; and a titillation is commonly felt in these parts, similar to that which remains after a limb, which has been numbed by the cold, is restored by the fire or friction, but with this difference, that the sensation in the barbiers is more painful; and the speech is sometimes so much obstructed, that the patient can hardly pronounce a syllable articulately. Besides these, there are many other symptoms, which, however, all confirm the existence of a cold and viscid humour.

The cure of this disorder is generally very tedious, the humour being difficult to resolve. For the most part, however, it is not mortal, unless it seizes the muscles of the breast and stomach, and thereby stops the respiration. Lying in bed should be avoided as much as possible; and the patient ought to walk, ride on horseback, and use all the more violent kinds of exercise; from that of running, the disease itself will prevent him. Strong frictions, even to pain, are absolutely necessary, and these are very conveniently performed by the slaves. Fomentations and baths, made of the privet of the East, are also extremely advantageous: this herb resembles the water-pepper in the leaf, and is of a sweet and aromatic flavour; it is not so much used in medicine as camomile and melilot, but is thought to excel them in it's dispellent and resolving quality. The feet and hands should be anointed with oil of cloves and mace, mixed, however, with oil of roses; for the former, when applied alone, are too caustic, and easily excoriate the skin. Besides these, an excellent kind of naphtha is brought from Sumatra, which is called, by

the Indians, oil of rearth, and like the naphtha, known in Europe by the name of *oleum petræ*, springs out of the earth, or oozes into lakes and rivers from the contiguous rocks. This oil is held in so much esteem by the Barbarians, that the King of Achen, the most powerful prince in that island, has prohibited the exportation of it, under pain of capital punishment; so that when any foreign vessel visits any of the ports of that coast, it is common for the inhabitants to bring it secretly to the ship by night for sale. This oil, when rubbed upon the parts affected by the barbers, affords wonderful relief. It has a dull, but not disagreeable smell; and the genuine naphtha, or oil of earth, is esteemed one of the finest and most penetrating of all the bituminous species: but what is imported into Europe, under that name, is said to be sophisticated, or is rather a composition of the cocoa-nut and medicated earths.

If the disorder is chronical, and of long standing, nothing is more effectual than decoctions of china, and sarsaparilla roots, and the guaiacum wood; which, by their mild and friendly warmth, soften and separate the cold viscid humours, and discharge them by sweat and urine. During this course, however, proper purges should be interposed; among the best of which, are extracts of aloes and gamboge.

Bleeding is hurtful; for the fault lies not in the quantity, but the quality of the humours; and the blood is the fountain of heat, and the source of animal life.

To complete the cure, medicines which promote sweat and urine, and strengthen the nerves, should be administered; such

as Venice treacle, mithridate, and the like; to which must be added, constant exercise.

The Indians have a method of putting the patient into a hole dug in the ground, and covering him with sand up to his neck. This is performed in the middle of the day, and he remains there as long as he can bear the heat of the sand. Camphire, with the decoction of guaiacum wood, have been found beneficial in the barbers: but nothing is so likely to promote the cure, as a removal into another air; without which expedient, the patient generally continues paralytic for months, in spite of all the efforts of skill, and the most powerful nervous medicines.

This disease is most violent and frequent on the Malabar coast; where, especially during the months of December, January, February, and March, it attacks those who unwarily sleep exposed to the land winds, which issue every morning about sun-rise, from the neighbouring mountains; suddenly seizing them with a painful sensation in the periosteum, or membrane which covers the bones of the arms and legs. In some persons, the pain abates as the day advances, and the sun warms the air; but in others, it receives no alleviation, even by day, and is attended with a weakness of the knees, and uneasy sensation in the calves of the legs and soles of the feet, especially on any attempt to walk. Medicines have little effect on this disease till after the shifting of the monsoon, unless the patients can be removed to the coast of Coromandel, or to any place on the eastward of the Balagat mountains, where, by the change of air, they quickly recover.

C H A P. XIII.

Of the Spasm, in the East Indies.

THE disorder of the *spasm*, almost unknown in Europe, is so common in the East Indies, that it may be reckoned among the endemial diseases of the country. The attack of it is sometimes so sudden, that the subjects of it become in an instant as rigid as statues; while the muscles, either of the anterior or posterior parts of the body, are involuntarily and violently contracted: a disorder which, without any primary defect of the vital or natural functions, quickly sends the wretched sufferer, in excruciating torments, to the grave; totally deprived of the capacity of swallowing either food or drink. There are, likewise, other partial spasms of the limbs, but these are more gentle and temporary.

Those who are affected with this disorder, look horribly in the face of the by-standers, especially when what is called the *cynic spasm* comes on; and both the cheeks are drawn in convulsion towards the ears. A red and green colour is reflected from the eyes and face; the teeth gnash; and instead of the human voice, a rude sound issues from the throat, and seems as if it was heard from a subterranean vault; so that to those unacquainted with the disorder, the person appears to be possessed.

In this disease plentiful bleeding was formerly thought proper; but though apparently necessary for preventing the consequences which may arise from so violent and general a constriction of the muscles, yet it is affirmed from experience to be rather of prejudice than utility, unless the patient is of a full and sanguine habit, or the disorder is attended with a fever,

Frictions and strong ligatures are of considerable use, as also embrocations of oil of mace, mixed with oil of anise or roses,

or oil of turpentine and Indian spikenard, which the island Java produces in abundance: large cupping-glasses, without scarification should likewise be applied to the neck, loins, shoulders, and breasts, by which a repulsion of the thin and bilious humour will be made from the muscles and nerves.

If by these applications the violence of the paroxysm should abate, and the patient recover the power of swallowing, antidotes should be administered in a liquid form, which may correct the poisonous quality of the humours, and evacuate them by urine or sweat; such are the bezoar-stone and shavings of the horn of the rhinoceros, mixed with Venice treacle or mithridate; antimonial emetics will also be proper, in such strength and frequency as the particular circumstances of the disease, and the situation of the patient may direct: and this disease is so rapid, acute, and dangerous, that it admits of no procrastination. And every possible method of cure should be carried into immediate trial: but if it increases, or the original attack is so violent, that the patient is incapable of swallowing medicine, the belly ought to be opened by clysters of the most stimulating kind, such as the following.

Take the Eastern privet above-mentioned, yellow mallow, and marsh mallow, of each one handful—anise-seed, fennel-seed, cummin-seed, and dill; or anise-seed, of each two drams. Boil these in as much water as will strain to a pint; and add to the strained liquor, of coloquintida, or bitter apple, powdered, half a dram—of sal ammoniac or nitre, one dram—of oil of dill-seed, three ounces—and of the following electuary, one ounce. Make a clyster.

To

To make the electuary.

Take of guaiacum wood, one pound—of sarsaparilla, four ounces—of the bark of guaiacum wood, one ounce and half. Bruise these ingredients, and let them boil twenty-four hours in a sufficient quantity of river water; strain it, and whilst it is boiling hot, add of the leaves of fenna, six ounces—of polypody, three ounces—anise-seeds and fennel-seeds, of each one ounce and half—of black hellebore, six ounces—of all the myrabolans mixed, and pulp of tamarinds, of each one pound. Let it boil up again, and then strain it a second time, and afterwards add to it, of the pulp of the *cassia fistula*, or pods of the pudding-pipe tree, six ounces—of fennel-leaves, powdered, and powdered rhubarb, of each five ounces—of the bark of guaiacum wood, powdered, two ounces—of white sugar, enough to make the medicine palatable—and of the electuary of scammony, one ounce to every pound of this electuary.

After this clyster, those parts of the patient's body which are principally affected, should be anointed with the oils we have mentioned above, and in particular the oil of earth; and baths and fomentations should be made of the eastern privet, and the leaves of a shrub, called *davullontas*, which grows to the height of a man, with a leaf divided in the edge, and in flavour nearly resembles balm: these leaves have an anodyne and specific kind of quality, and are peculiarly adapted to this terrible disorder, assuaging the racking pain which arises from the contraction of the nerves. Besides the herbs here mentioned, the ingredients commonly used in Europe for emollient fomentations, with the addition of Venice treacle, have been found highly advantageous, and even preferable to bathing the extremities, though that has been strongly recommended by some authors.

It is almost unnecessary to remark, that fomentations ought in all cases to precede the use of ointments.

The sal prunella, taken inwardly, is incomparably useful, evacuating the bilious

matter by a plentiful flow of urine, and gently cooling the blood where any feverish heat is attendant; but, above all, particular regard is to be had to the violence of the pain, which is so urgent a symptom, that anodyne applications are of more immediate necessity than those which affect even the cause of the disorder; for that purpose, liquid laudanum is extremely proper, as likewise mithridate and the extract of saffron. And though the use of opiates has been condemned as injurious to the nerves by their stupifying quality, yet this objection is ill-founded; for, besides that the great heat of the climate authorizes the use of these medicines, it is certain, that without recourse to them, in cases of such urgent extremity, the patients could not possibly survive, whilst other means could be tried: add to this, that the opiates used in the east are so duly prepared, that they may be safely administered, even to infants; and, in fact, were it not for these valuable medicines, we might abandon every physical application in all the hot diseases of this country; an assertion which, however unwarrantable it may appear to those who are unacquainted with the practice of this part of the globe, will be found by experience to be perfectly just; and is indeed confirmed by the unanimous testimony of modern practitioners; and the rectitude of this practice is so clearly ascertained, as to justify the most resolute and liberal prescription of opiate medicines that occurs in any physical dispensation. We have already observed, in treating of the *tetanus* of Europe and the West Indies, that authentic cases of various spasms are recorded, wherein a scruple of opium has been administered in the space of twenty-four hours; which, though it suspended for a time, and a periodical repetition of it in the end overcame the disease, neither occasioned a stupor, nor procured an uninterrupted sleep of three hours: musk, likewise, has been joined to opium, with great success; and a case of the *opisthotonos* at Haslar Hospital, near Portsmouth,

mouth, has been mentioned, in which opium and camphire laid to the feet, instantly and repeatedly removed the spasm, which always returned with it's former violence when the application was withdrawn.

In regard to the regimen, it is a matter of no great importance, for the extreme violence and rapid progress of the disease supercede all deliberate proceedings, but when the violence of the paroxysm begins to abate, broths made of chickens and veal should be used, in which cardamoms and tamarinds, both of which are produced abundantly in Java, have been boiled, and these broths

will serve as a medicine as well as for food.

And upon the whole this disease appears to be so perfectly analogous to the opisthotonos of the West Indies, that we may refer our readers for the farther symptoms and treatment of it, to the chapter on that subject in the preceding part of this work, premising only that the management and medicines prescribed in the present chapter are peculiarly adapted to that species of this disease, which arises from cold, and not altogether to those which are occasioned by wounds or punctures.

C H A P. XIV.

Of the Colera, Diarrhœa, Dry Belly-ache, and Dysentery, of the East Indies.

THE *colera* and *dry belly-ache* are very common diseases in hot climates, and may be termed original; and among a number of patients, before a fever or flux becomes epidemic, sometimes one of these diseases attacks, and sometimes another: some are afflicted with the *colera*, some with the *diarrhœa*, and others with the symptoms of bilious colic or dry belly-ache; and if these diseases are neglected in the beginning, fruitless straining, gripes, and constant bearing down to stool come on, and the case at last terminates in a true dysentery.

As these diseases are not only analogous, but merely depend on the same causes, the principal endeavour for a cure in all of them, is to evacuate the bilious redundancies in the stomach and bowels; in doing which, regard must always be had to the original disease. In a *colera*, it would be dangerous to give any medicines, with this intention, more stimulating than pukes with camomile tea, emollient clysters, and magnesia; and afterwards the cure will depend, in a great measure, on a liberal use of opium.

In the bilious colic, or dry belly-ache, it is sometimes necessary to bleed; and, after this evacuation, the same means of cure may be used as in the beginning of a flux: for here also the stomach should be cleansed by gentle vomits; the belly should be kept open by mild laxatives; and the pain must be abated by opiates, clysters, fomentations, and the warm bath. A dysentery for the first two or three days frequently resembles a simple purging; but as soon as the mucus, or slime, is washed off the bowels, the gripes, and inclination to go to stool, become violent, and the pulse grows considerably quicker; the stools are small, slimy, and often bloody; and unless the progress of the disease is prevented by proper applications and management, it grows worse, by degrees, till it either proves fatal, or becomes in a manner chronic. In low, swampy, and other unhealthy situations, when epidemic fevers rage, the dysentery is very dangerous. It begins with great rapidity, seeming to be rather a symptom of the fever, than an original disease; and this kind of flux has been justly considered by

the most eminent medical writers, as the same disease affecting the intestines. But as it greatly alters the preceding symptoms of the prevailing fever, and differs, in some respects with regard to the cure, it may be proper to give a description of a putrid dysentery, which sometimes happens in the East Indies in the sickly seasons.

The disease, for the most part, begins with lassitude, slight shivers, disorder at the stomach, and bilious vomiting. At first it exactly resembles a fever, but the paroxysms do not run so high; and the patients are not so apt to rave. In a day or two, sometimes earlier and sometimes later, the dysenteric symptoms make their appearance, and are attended with extreme loss of strength, and depression of spirits. If there have been any remissions of the fever at first, they now disappear; the skin continues hot, the pulse is small and quick, the tongue very foul, and the patients are frequently troubled with hiccup.

When the patient makes timely application for assistance, the fever and gripes are carried off in a few days; and, in general, the disease is either removed, or becomes chronic. If it is neglected at the commencement, the symptoms are daily aggravated; the tongue becomes quite black, and the teeth are covered with a clammy tough slime. The nausea, hiccup, and gripes, are very severe; the stools small, frequent, and exceedingly putrid, accompanied with a continual bearing down, and sometimes a protrusion of the gut at the fundament. The frequency of the stools soon brings the patient to extreme weakness, and his countenance becomes inexpressibly ghastly.

As soon as a mortification seizes the bowels, the gripes and other painful symptoms suddenly vanish; but the nausea, hiccup, and vomiting, still continue: the pulse becomes more small, quick, and fluttering; the stools pass off insensibly, and are intolerably offensive; and at this period,

in most cases, twitchings, tremblings, and delirium, are added to the other symptoms.

At this stage also of the disease, it is no uncommon case for the patient to vomit a nasty thin matter, tinging the linen and bed cloaths black. Some have pustules on the legs, arms, and breast, filled with a watery matter, which degenerates into black putrid sores. At last, the pulse fails; the extremities become cold; and the patient, after remaining for some days almost insensible of his miserable situation, generally expires in the act of going to stool, exceedingly emaciated.

In some patients, the dysenteric fever, through the whole course of the disease, has regular remissions; in others, it is accompanied with a pain in the region of the liver, a troublesome cough, and a vomiting of thick and glutinous slime. The delirium is in very few cases constant, the senses and judgment recurring at intervals.

The duration of the dysentery is various; at Bengal it frequently proves fatal in a few days; in China, if the case is neglected, it seldom exceeds seven or eight; and in most places it is not often protracted beyond the sixteenth day, unless it assumes a chronic form, and then the disease will sometimes terminate fatally after a month, or even six or seven weeks.

Bleeding has been generally esteemed absolutely necessary in the beginning of most fluxes; and when there is a considerable fullness, or when the disease is accompanied with an inflammatory fever, this evacuation is undoubtedly calculated for the relief of the patient, as it operates to restrain the hæmorrhage. But in hot climates, where most fluxes are either of a chronic nature, or accompanied with a putrid fever, the strength of the patient decreases from the commencement. When blood appears in the stools, (which, however, is not always the case) it is the most evident symptom of a disposition to waste away, and a tendency in the humours to putrefaction is apparent; for

for the hæmorrhage seems to be rather owing to the dissolution, than to too great a quantity of the circulating fluids; and the intestinal inflammation appears to be occasioned by the acrid matter contained in them. Lessening the quantity of blood would only serve to impair the patient's strength, and though it might not immediately prove fatal, would at least precipitate his fate; and in the few cases which have seemed to require bleeding, the operation, though performed early in the disease, has not appeared to afford the smallest relief.

Emetics are unquestionably extremely serviceable in the early stages of the disease, and the most effectual are either emetic tartar combined with ipecacuanha, or a few grains of the former dissolved in a decoction of tamarinds; and the last form is to be preferred if the patient is feverish. In either of these ways, this medicine proves not only a powerful emetic, but by acting as a purge, relieves the troublesome tenesmus, or bearing down to stool.

Purgatives are of equal consequence in this disease; but though they are required to act powerfully, care should be taken that they do not stimulate too much; and, on this account, the neutral purging salts answer best: and of this class of medicines, glaubers and the common purging salts, and in particular the latter, are found to operate with most ease and effect. As the frequent repetition of these medicines is in most cases necessary, they should be rendered as palatable as possible; yet every addition which alters their easy purgative qualities should be avoided with great care; manna, which is very commonly given with salts, contributes to render them nauseous, and occasions a griping during the operation.

The best correctors of such bitter saline purges are cream of tartar, lime-juice, or brandy, which also takes off great part of the nauseousness; and this is undoubtedly a matter of some importance, where there is an absolute necessity to continue them

for a length of time; besides that in putrid cases, such additions will be conducive to the cure.

The castor oil, when properly prepared, and not grown rancid by keeping, has been also found to be one of the best purges in the dysentery, as it seems to be possessed of an anodyne quality, bringing relief to the painful gripes as soon as taken. Nor does it ever fail to procure copious stools, and to relieve the bearing down.

Rhubarb in considerable quantities, and accompanied with calomel, for want of other purgatives, has been sometimes tried; but during the operation of these medicines the gripes are generally augmented, and the troublesome bearing down to stool is seldom or ever mitigated; and in the putrid flux of these warm climates, calomel is certainly a very improper addition to any purgative; and repeating it so often as these medicines become necessary in the course of this disease, must certainly add to the putrid tendency, and produce very bad consequences: nor is this a matter of mere speculation, but an observation founded on experience; for in the epidemic prevalence of these fluxes, when the patient has been on the recovery, but still in a convalescent state, so much has the blood been disposed to dissolution, that a few doses of mercury, given for some urgent venereal symptoms, have not only brought on a troublesome salivation, but likewise a return of this disease.

But though rhubarb purges do not answer in the beginning of fluxes, yet when these diseases have been of long continuance, and have in a manner become chronic, a dose administered now and then, at proper intervals, with the intermediate use of strengtheners, often produces the best effects.

In the flux at Bengal, and places of like situation, when the patients continue long in the convalescent state, rhubarb often proves of great service, particularly when five grains of the powder, or a dram of the tincture, is prescribed to be taken in a glass of

of wine before dinner; but in bad cases, a decoction of bark and elutheria should be prescribed at the same time.

Ipecacuanha in small doses has been accounted a specific for the cure of the dysentery, and the qualities of causing a perspiration, relieving the gripes, and opening the belly, have been commonly ascribed to it; and though in colder climates it may really possess them, yet in these warmer ones, it has been frequently tried with very little advantage; a few grains of it will keep up a nausea, and prove extremely troublesome; but it does not often relieve the gripes, or occasion an easy stool; and prescribing it in this manner, in the beginning of the disease, is little better than trifling with the patient. From the failure of ipecacuanha so much celebrated as a principal remedy in cold climates, doubts have arisen whether it may not be injured by keeping, and whether by that and the heat it is not totally deprived of its purgative qualities; and that this is the case, is the more probable, from the great authorities who have recommended it in the dysentery, as these writers gave it fresh, and in that state chiefly relied upon its virtues as a cathartic.

But it must not be inferred, from what has been said, that ipecacuanha is to be treated as an useless medicine in the dysentery: on the contrary, when it is joined with opium, it is one of the best astringents: and when given with an intention to clear the first passages, its purgative quality, if it is impaired, may be restored by the addition of a quarter of a grain of emetic tartar to each dose. And in this last-mentioned form, it may be given with great hope of good effects; but when the purgatives already mentioned can be procured, they should always be preferred.

The most usual astringent medicines prescribed in the dysentery are, diascordium, philonium, and Venice treacle, or powders of the same composition called species, in the form of electuaries and confections: but when these medicines are sent out from

Europe to warm climates, they soon ferment and spoil by keeping; and though the same objection cannot be applied to the species, yet most of these are very injudicious mixtures, and neither the one or the other are to be relied on; notwithstanding these antidotes, as they are called, have stood the test of ages, and have been implicitly prescribed by one eminent physician after another, till their virtues have been in a manner rendered sacred; so that to treat them with the contempt which they will be found on proof to merit, would be such an offence against the medical creed, as might be productive of some danger. Notwithstanding which, we cannot forbear to observe, that as these compositions consist of an opiate and aromatic, they may easily be prepared on the spot, when such medicines are judged necessary; and the virtues of any one of them are much exceeded by the combination of an opiate with an emetic.

After evacuations, when astringents seem proper, the extract of logwood, and the semi-rouba have been prescribed; but neither of them appear to be efficacious. The first, however, prepared, soon becoming mouldy in warm weather; and the latter, not keeping better; to which, perhaps, it may be principally owing that these medicines so seldom answer. And, indeed, the only medicines which are certainly attended with any remarkable advantage, are opium and ipecacuanha, the decoction of logwood, bark, and cascarilla, or elutheria. However, where the disorder has been neglected at first, the effects of them all are very uncertain, and most of them, if given too early, are apt to exasperate the disease.

From the corroborant, astringent, and antiputrescent virtues of the Peruvian bark, this medicine seems to be well adapted for the cure of this disease; and particularly when it arises from the same causes which produce remitting fevers. But though it is, without doubt, possessed of virtues infinitely superior to any other astringent, yet it is by no means so great a specific in the fluxes

fluxes, as in the fevers of these climates. In the putrid flux at Bengal, it has been attended with such beneficial effects, that it has been found as essential to the cure, as evacuations by vomits and purges. At first, the cascarilla may be given with great advantage; but when the symptoms of putrescency run high, it should be combined with the Peruvian bark, the latter being of a much more antiputrescent nature; and this medicine may be at first given in decoction, and afterwards, when the stomach can bear it, in substance: yet even here, in many cases, the putrefaction advances so hastily, and the fæces in the bowels are so acrid, that notwithstanding the use of opiates, the bark is carried off by stool before it can produce any effect, and the patient falls a victim to the disease; and in the Straits of Malacca, and in China, it has been tried, and has not only failed to produce good effects, but it has seemed to aggravate all the symptoms; nor has it appeared to be attended with the least advantage, till the disease has been overcome, and nothing was wanting to compleat the cure, but to brace the relaxed internals, when it has been of some service; though even then, in general, preparations of opium, with ipecacuanha and the decoction of log-wood or cascarilla, has been known to answer better. Nor is it by any means astonishing, that all dysenteries should not derive the same benefit from the bark, as the nature of the disease depends greatly upon the epidemic constitution at the time; it must, however, be allowed to have this advantage above all other astringents, that no kind of danger attends the trial of it; but on the contrary, if it does not promote the cure, it generally prevents the disorder from growing worse; whereas a premature use of some of the other medicines may be productive of fatal consequences: and the greatest difficulty which arises in prescribing the bark is, when symptoms of putridity in fluxes demand it's immediate use, and yet

the bad state of the stomach and bowels will not admit of retaining a quantity sufficient to answer the intended purpose. Perhaps, if decoctions and infusions of this medicine could be applied externally, it might answer some very good end; but, from the scarcity of it, and the high price it bears in the East Indies, it is probable that such an experiment hath never been tried.

For the cure of this disease, the following general method hath been recommended as most effectual. On the first approach of the disease, the following emetic powder may be administered, which seldom fails to operate powerfully, and generally relieves both the stomach and bowels.

Take of ipecacuanha finely powdered, five grains—of emetic tartar, one grain. Mix them well together; and if this does not operate sufficiently in an hour, repeat it.

But if the dysentery is attended with a fever—

Take of the decoction of tamarinds, four ounces—of emetic tartar, from one grain to two. Dissolve the tartar in the decoction, and give two spoonfuls every hour till it procures two or three stools.

And on the succeeding morning the following—

Take of Epsom salts, from three drams to six, according to circumstances, dissolved in three ounces of boiling water—and add lime juice or cream of tartar, to render it palatable; and a spoonful of brandy occasionally.

If this does not operate within an hour, it should be repeated; and unless the symptoms, or at least the gripings and bearing down to stool, abate, the same purge should be given for the four following days, but in such quantities only as will promote a free discharge by stool; and during this

course, the following opiate may be taken every night at bed-time.

Take of opium, ten grains—of Castile soap, thirty grains—of ipecacuanha, ten grains. Make the whole into forty pills with common syrup, and take from four to six pills every night.

But when the irritation in the guts is violent, emollient and anodyne clysters are necessary; and for this purpose, from six to eight ounces of a decoction of linseed, or starch, with forty or fifty drops of laudanum, may be injected.

But if the disease remains unabated, or if astringents appear to be necessary, small doses of ipecacuanha and opium may be occasionally given, recourse being from time to time had to the emetics and purges, if the gripes and tenesmus return.

When this disease is attended with any considerable degree of fever, the following may be given instead of the emetic powder.

Take of castor oil, from half an ounce to an ounce—of peppermint water, one ounce. Make a draught, to be taken in the morning.

As the disease abates, the following antiputrescent astringent will be found useful, to prevent putrefaction and to reduce the fever; but the evacuating medicines must not be discontinued, but used alternately.

Take of Peruvian bark in powder, six drams—of cascarilla, or elutheria in powder, three drams—of cinnamon, two scruples—of gum-arabic, two drams—of water, three-fourths of a pint. Boil till the decoction is reduced to seven ounces, adding the cinnamon and gum arabic towards the end of the boiling; strain it off, and add of the tincture of the bark, or of Port-wine or claret, one ounce and half: of this decoction, three or four table-spoonfuls may be taken every two hours; and, if necessary, four or five drops of liquid laudanum may be added, to prevent the medicine from running off by stool.

Though these continued evacuations may at first sight appear severe, in a disease attended with such symptoms of putrefaction and so great a deprivation of strength; yet those who are acquainted with the nature of such disorders will readily admit, that a continual fruitless straining, and painful inclination to stool, will weaken the patient more in twenty-four hours, than three or four easy stools, procured in the same time by a gentle laxative.

The remedies which will be found to answer best, in all fluxes indiscriminately, are emetics and purgatives: some objections are made to this course by Sydenham, in the *Essays of a Medical Society at Edinburgh*; but it may be observed, that purges, in the days of the judicious physician last-named, were very stimulating; and those tried in the cases mentioned in the *Edinburgh Essays*, consisted of rhubarb and calomel: had more lenient purges been prescribed, they would; probably have been attended with greater advantage.

The use of saline purges in this disease, was originally introduced by the judicious physicians of the army, during the last war in Germany. These gentlemen, incited by a liberal spirit of inquiry, made many excellent improvements in the practice of medicine, and their observations highly merit the esteem and admiration of the public.

The diet in this disease ought to be of the most antiputrescent kind; ripe fruit serves in the double capacity of medicine and food: and panada, sago, and such other light spoon-meats, with the addition of wine, which in case of any tendency to putrefaction should be increased, together with rice gruel, teas of emollient herbs, and toast and water, should constitute the diet; but all the drinks should be acidulated, unless the disease has been of long continuance, or the patient has been previous to the attack in a convalescent state, in which case both fruits and other acids should be administered with a sparing hand.

It is of great importance to keep the air about the sick cool and pure, during the whole course of the disease, and particularly on board ships and in hospitals, where many patients are often crowded together; for unless the parts appropriated to the reception of the diseased are frequently washed, fumigated and sprinkled with vinegar, it will be impossible to remove the disease, or to prevent it from becoming general, by any remedies that can be given internally.

When the season is sickly, the habitations of the sick should be carefully avoided: besides which, keeping the body clean will be found to contribute greatly to the pre-

vention of this disease; it may also be kept open by small doses of rhubarb, and the diet should be easy of digestion.

In the course of recovery, a relapse should be guarded against, by an abstinence from all animal food, except light soups. But as the patient's strength returns, a moderate use of such fresh meats as are of easy digestion may be allowed; and his best security will be, to continue taking the Peruvian bark till he is in a great measure restored to health, when the use of the cold bath, gentle exercise in a carriage, and above all, a change of climate, are the most effectual means to compleat the cure.

CHAP. XV.

Of the Hepatitis, or Disease of the Liver, in the East-Indies.

OF all the internal parts in the human body, the liver is most subject to disease in hot climates: it suffers by obstruction, inflammation, and suppuration.

The *disease of the liver* is very frequent in all parts of India; but is particularly prevalent on the coast of Coromandel: it may be either original, or symptomatic, as it sometimes attacks in perfect health, and sometimes accompanies or follows some other disorder.

When the disease is original, it is generally attended with an uneasy sensation of weight in the right side, under the region of the hypochondrium, or spleen, and usually with a very sharp pain about the shoulder or collar-bone on the same side; as the disorder advances, the countenance grows yellow, the patient complains of sickness, oppression at his stomach, a difficulty of breathing, and uneasiness when he lies on the opposite side.

These are the common symptoms of the disease; yet, on the dissection of human bodies, suppurations have been discovered in the

liver, when (from the appearances of the living patient) there have been no reasons to suspect inflammation or any other disease of this organ; it therefore often happens, that the disease is fixed, and becomes incurable, before any alarming symptoms appear. The yellow colour which accompanies the disease, is also an uncertain symptom, as the jaundice is always occasioned by the passage of the bile into the duodenum being obstructed; however, in most cases of this disease, the countenance becomes remarkably fallow, and if not yellow, has a tinge nearly resembling a lead colour.

But the disease of the liver has the greatest tendency to imposthumation; and when the abscess points outwards, and the matter is discharged externally by incision, there may be some hope of the patient's recovery; but when it bursts into the cavity of the belly, or into that of the breast, by an adhesion of the liver to the diaphragm or midriff, the case is in almost every instance fatal.

In cold climates, the remedies, as in other

other inflammatory cases, are copious bleedings, cooling purges, and blisters applied to the part affected.

But in the warmer climates of the East Indies, this treatment is found to be unsuccessful; and as the disorder in general proves speedily fatal, mercury has been prescribed as a specific, by experienced practitioners in that part of the world: and this medicine they use externally upon the part, and give it internally in such doses as may bring on a slight salivation; and when this effect is produced before the formation of matter, it will generally be found the most certain and expeditious cure.

But however fashionable this remedy may be, there is no doubt but the success of it is greatly exaggerated, and the application of it much too frequent; for it is often prescribed in such slight disorders of the liver, as in all probability would have yielded to a bleeding, or to gentle purging physic, properly repeated, and the application of a blister.

It is so seldom an original disease, that it is difficult to give particular directions for cure, the preceding or accompanying disorder being always to be attended to.

If the respiration is difficult, the cough tickling and troublesome, and the paroxysms of the fever irregular; when the countenance begins to turn yellow, a change which is frequently attended with sickness at the stomach, a retching to vomit, and pain about the collar-bone on the right side when the seat of the liver is pressed; it will be proper to take away some blood, the quantity of which must be determined by the habit of body: a blister should be also applied; and, on the succeeding morning, the patient may take the following laxative medicine.

Take of manna, half an ounce—of soluble tartar, two drams—of common water, three ounces.

If this draught does not take effect, it must be repeated, and continued for several days, at such intervals, and in such doses, as may serve to keep the body open.

On the abatement of the fever and the painful symptoms, the countenance frequently remains fallow, and the patient is much emaciated; when this is the case, the following may be administered every three hours.

Take of camomile flowers, six drams—of salt of tartar, three drams. Infuse six hours in a pint of boiling water; strain it off fine, and give a tea-cupful as a dose.

In such cases as seem to demand the administration of mercurials, the following may answer the purpose.

Take of calomel, two grains—of the saponaceous pill, ten grains. Make two pills, to be taken at bed-time.

And this medicine may be continued nightly till the mouth begins to be affected, when it may be omitted; and in this way the disorder may be cured without salivation.

But if, during the course of mercury, the difficulty of breathing should increase, or the pain in the side become more violent, the bleeding and blister must be repeated.

When the disease of the liver follows obstinate fevers and fluxes, and is attended with a putrid instead of an inflammatory disposition, mercury would be prejudicial; nor is there any method of cure which promises to be more successful, for in these cases the patient is generally so reduced by the antecedent disease, that very little hope remains of his recovery.

C H A P. XVI.

Of the Remitting Fever of the East Indies.

THIS disease occurs at all times in hot climates, but seldom rages epidemically, unless the weather has for some time continued close, moist, and sultry.

When this disease appears at sea, where it is not affected by exhalations from the land, the fever generally approaches with lassitude and shiverings, though sometimes only with a chilliness and pains of the back and bones: these symptoms are succeeded by nausea, sickness at the stomach, intense heat, violent thirst, and pains above the eye brows; the pulse, though soft, becomes very quick and full; the head aches constantly and feverely, and the patient is troubled with great restlessness, anxiety, and oppression, and in the height of the paroxysm discharges great quantities of bile by vomit. The crisis of the fit is generally by sweat, and the patient enjoys a short interval of comparative ease, during which, however, the pulse seldom returns to its natural state, and he generally complains of a bitter taste in his mouth, giddiness, head-ache, and want of strength. In a few hours the feverish fit returns, which is discoverable by an aggravation of the symptoms, and is carried off in like manner by a sweat, or sometimes by an evacuation of bile.

If the disease is neglected, the remissions grow more and more indistinct, and the intervals shorter; and, sooner or later, it becomes a continued fever, and is accompanied with many of the following symptoms: the tongue, which at first was only white and furred, grows dry and black; the teeth and lips are covered with a glutinous slime, and sometimes white pustules appear in the mouth and throat; the heat, head-ache, and uneasiness, are augmented; the eyes become dull and heavy, or wild and fixed; and the

patient falls into a drowsiness or delirium, attended with tremblings and twitchings. As the patient grows weak, the pulse becomes very small, irregular, and fluttering; and the heat of the skin changes to a cold, clammy moisture; and if there have been no symptoms of putrefaction hitherto, they now appear: these symptoms, however, do not always take place; for the patient is sometimes carried off without any evident marks of dissolution in the blood, even though the disease has been of several weeks continuance.

In some cases, instead of the paroxysms already mentioned, the patient at first seems only indisposed with giddiness, head-ache, and lowness of spirits; but whilst he is still able to go about, grows always worse towards night: and when the disorder commences in this way, it may generally be observed, that the fever, in its course, will be attended with greater danger, less distinct remissions, and more evident signs of putrefaction.

These symptoms commonly characterize this fever, as well at sea as in favourable situations on the land; but in low, woody countries, where the current of air is impeded and interrupted, and, in addition to intense heat, the air is generally moist, but especially if there are noxious effluvia from marshes or stagnant waters, the disease is more rapid, universal, and fatal.

But besides these general external causes, there are also some others which seem to have a very powerful influence on this disease, and render it more fatal. These are principally, too great an abstinence from food, repletion from a diet composed chiefly of animal food, the passions of the mind, and contagion.

Of these, the two first are such evident causes of sickness, that their powerful influence cannot be doubted: and it is a common observation in this part of the world, that those who have been much reduced by evacuations, and in particular by mercury, and those who are great eaters of animal food, are more liable to the sickness of the season, than those whose constitutions are good and who are temperate in their eating, and when seized have a much worse chance to recover. Seamen, also, from a diet of animal food in a very improper state, and the total want of vegetables, are more liable than others to diseases of this kind on their arrival at unhealthy ports.

Grief, vexation, disappointment, all the dejecting passions of the mind, are very powerful predisposing causes; and prove, in a variety of instances, fatal to those young adventurers who annually leave their native land, upon the flattering and delusive expectations of finding mountains of gold melted into ingots for their immediate acceptance; but, upon their arrival, when they receive the mortifying intelligence, that riches here, as well as at home, are the fruits of industry, and not to be so suddenly acquired, become dispirited, and yield to the very first attacks of disease; whilst others, though equally unused to the climate, having ideas less sanguine, or better prospects, are by no means so liable to sickness, and when they are actually seized by it are infinitely less subject to danger. But of all the impressions of the mind, none are attended with such sudden and deadly effects, as apprehension and panic; for, when a dangerous fever appears on board a ship, the alarm will frequently occasion instant sickness; and, upon this principle, it may not be difficult to account for the sudden deaths, which in this country frequently happen to persons who have been attending the funeral of a deceased friend; for, if the sickness, as has been suggested, were occasioned by the exhalations from marshy burial-grounds, or putrid effluvia from the water which issues

from the adjoining graves, the grave-diggers would be more subject to attacks than the attendants on the funerals; yet this is not the case, for it generally happens that the tender and humane suffer, while those who are unaffected with the melancholy spectacle before them escape. But there is still another and much more powerful cause of the putrid remitting fever.

When this fever prevails in hot climates, it seems at first to be infectious only from the constitution of the air, but afterwards, when the sickness has spread itself, and been of long continuance, there is no room to doubt that a much worse kind of contagion proceeds from the putrid effluvia of the sick: this has been very evident when this fever has been epidemic among the companies of ships; at first only two or three people are affected, and those in particular who have been employed in hard duty upon deck, but in a fortnight the fever will be found so universal, that scarce any escape, except the officers and those who have no communication with the sick, and the cooks who work in the galley among the smoke, which seems to be often a protection against this disorder. Another circumstance which plainly shews the power of contagion is, the great mortality which generally takes place amongst the visitors and attendants upon the sick, few of whom can preserve themselves from the infection, even where those they attend are placed in large commodious and airy rooms, and every preventive precaution is used that judgment or prudence can suggest; nay, many of the medical assistants, though their visits to the sick are of short duration, and they arm themselves with every antidote within their knowledge, partake more or less of the prevailing distemper.

The seat of this disorder appears to be at first in the stomach; and that intestine which is known by the name of the duodenum, and it seems to be aggravated by a great secretion of acrid bile, though it is
not

not clear whether this is the cause or effect of the disease; the head-ache and delirium only appear to be symptomatic, and not to depend on inflammation.

This kind of fever does not seem to require bleeding, though it has been recommended generally by all practitioners, with a view to remove any fulness, to abate the fever, and to bring it to regular remissions; and in cold and temperate climates, this evacuation may possibly have sometimes a good effect; at least, taking away some blood in the beginning of most fevers, can be attended with no great degree of danger. It may likewise be of use upon first entering into warm weather, when many of the fevers are so mild as to require little other cure than to cleanse the first passages, and to produce gentle perspiration by relaxants; but after a short continuance in a warm climate, the evacuation of bleeding is very detrimental; and, though it has been frequently tried, when it seemed to be strongly indicated by great thirst, head-ache, flushed countenance, and oppressed pulse, yet it has seldom been known to answer any good purpose.

Antimonials have been tried in various preparations, but emetic tartar seems preferable to all others; and a powder, which is the most convenient form for common use, may be made with five parts of magnesia to one of the tartar; nor by this means is the emetic tartar in the least robbed of any of its virtues, which might be expected from the addition of the absorbent: however, if after exhibiting a few doses of this medicine, its operation does not proceed with effect, drinking acidulated liquors, will not only render this preparation, but almost every other antimonial, more active.

Dr. James's powder has also been given; but this appears to be a much more uncertain antimonial than emetic tartar, frequently lying inactive in the stomach and bowels for several hours, and afterwards

operating with great violence. Even when it succeeds, its effects are so similar to those of emetic tartar, that the last may generally be preferred to a remedy the preparation of which we are in some measure ignorant of. This medicine is, however, commonly sent out with directions to hot climates; and, when it falls into proper hands, may probably be a very useful one; but when given indiscriminately, and continued for any length of time, has been thought rather to produce unfavourable than happy effects. The long-continued use of it may be proper in inflammatory fevers of cold climates; but the profuse evacuations, and particularly the sweats which it occasions, seem to confirm the opinions of those who hold it rather injurious in the putrid fevers of hot countries.

Febrifuge virtues of the highest quality have been ascribed to the emetic tartar, when given in small doses, and in some measure very deservedly, as a remission often ensues after its use; but this may be accounted for by reflecting, that during the operation of this medicine, it occasions a strong artificial paroxysm, which at last is carried off by a profuse sweat, though the original disease may still continue, and in a few hours return with as much violence as ever. Its febrifuge virtues, in hot climates, seem principally, if not altogether, to depend upon its evacuating powers, and its procuring a passage for the morbid humours through the skin, which sometimes removes a fever just in the same way as the timely exhibition of a puke and sweat. But when once the fever is confirmed, emetic tartar may sometimes be given in vain, without its appearing to possess virtues to remove it, or bring it to more regular remissions; and when the disease has arrived to any degree of malignity, such a stimulating relaxant is extremely prejudicial.

Saline draughts are generally prescribed, with a view to dilute the bile, to cause a perspiration, and to bring on the fever to more

more regular remissions; but most fevers have this disposition, and what is merely the nature of the disease, has been often considered as the effects of the medicine: when given in a state of effervescence, or fermentation, they will sometimes check a vomiting, and remove an urgent symptom; but when administered alone, the best character which can be given of them is, that they are very inoffensive, but possessed of no such virtues as will either cure the fever, or bring it to more regular remissions. The other medicines which have been prescribed with the same intention, are Mindenerus's spirit, and spirits of nitre. Whole pints of the first have been given in these diseases, without producing any sensible effect; and if the fevers of warm climates demand the use of nitre, the stomach of the patient will not bear it in sufficient doses to answer any good purpose: indeed, the prescribing such remedies, seems to be little other than an attempt to do something; for when no other remedies are necessary, lemonade, and barley or rice water acidulated, (the usual drinks of the patient) answer much more effectually every purpose for which they are intended.

Cordial medicines, and those alexipharmics, which are supposed to possess the power of driving the disorder through the skin, have also been tried; and, among them, camphire, Virginia snake-root, musk, castor, salt of amber, salt of hartshorn, and the powder of contrayerva; the first has been commonly given in the form of the camphorated julep, as it has before been prescribed in this work, with a view to cause a perspiration to relieve the head, or to abate some immediately violent and troublesome symptoms; but it hath been seldom attended with any remarkable success. In whatever way camphire is prescribed, it is a very nauseous medicine, and in these hot climates will hardly ever be retained on the patient's stomach in sufficient doses to answer any good purpose. The snake-root is ordinarily given in a decoction, with a small quan-

tity of Venice treacle, and has, in some instances, seemed to answer better than most medicines of this class, and to be attended with considerable advantage in the decline of fevers, when accompanied with a profuse diarrhœa: however, the same intentions may be answered by much more agreeable medicines; and for this reason it is in a great measure laid aside. Nor have any of the rest been found very efficacious, except musk, and the salt of hartshorn. The first, if given to the quantity of a scruple every four hours, seldom fails to abate the hiccup, and any other nervous symptoms that may occur; and it likewise acts as a powerful cordial and perspirative. The latter is generally prescribed in low cases, only as a stimulative, and is therefore never long continued; so that this class of medicines are not to be depended on: if they are prescribed with a view to relieve the head, blisters will be much more effectual; wine answers the purpose much better as a cordial; and warm fomentations, or bathing the extremities, as antispasmodics and perspiratives.

It is indispensibly necessary, in the beginning of this fever, to cleanse the intestinal passages by gentle vomits and purges. Nature seems always to point out such evacuations, by the plentiful secretion of bile; which, if not speedily discharged, will not fail to bring on an inflammation of the stomach, nausea and hiccup; which, in the course of the disease, will prevent the effects of medicine, however judiciously prescribed, and powerful in it's quality.

When the fever attacks slowly, it will be right to give a vomit of ipecacuanha, with a few grains of emetic tartar; and if this does not move the belly, a dose of neutral purging salts should be given the following morning.

But when the fever is epidemic, and rages with fury, no time is to be lost; and therefore this method of evacuation is too tedious; and, in such cases, the emetic tartar may be depended on, and should be given to the quantity of a quarter or half a grain every hour,

hour, till it acts by vomit and stool, which last intention is rendered more certain by the addition of manna, decoction of tamarinds, or a small portion of purging salts. And any of these medicines may be given immediately after the shivers, as they not only tend to mitigate the feverish paroxysm, but bring it to a quicker issue. But it should be observed, that evacuations of this kind are not to be continued a length of time; nor must we expect by this means to prevent a generation of bile: for so long as the feverish indisposition continues, although an emetic and cathartic are repeated every day, more will still be created; but as soon as the fever is removed, the effect will cease of course.

When the intestinal passages have been thoroughly cleansed, the principal part of the cure depends on prescribing the Peruvian bark, in as large doses as the patient's stomach will bear, without paying any regard to the remissions and returns of the fever. If the remissions are perfect, the bark will have a more speedy effect: but even if the disease is continued, the use of it effectually prevents it from growing dangerous and malignant. The bark being antiputrescent, cordial, and never obstructing or checking any critical secretion, is well adapted to the cure of fevers in hot climates. When the stomach is weak, it should be given in decoction; but as soon as the patient can bear it, immediate recourse is to be had to the powder, either in the saline draught, in Port wine, or in any other form that will be most agreeable.

But if, after all the necessary evacuations, the stomach remains weak and unsettled, which is often the case in bad fevers, great advantage may be derived from a dose of solid opium: it seldom fails to remove these symptoms, and then the bark will sit easy on almost every stomach. But if, on the contrary, the disease is allowed to go on, the disorder of the stomach will increase, and other symptoms arise, which

will render the effect of every medicine extremely doubtful.

The effects which are almost certainly to be expected from the bark are, a gentle, equal sweat, and a loose stool: if it does not produce these effects, and especially if the symptoms indicate an overflow of bile in the first passages, laxatives ought to be joined with it; but if it runs off by stool, it is absolutely necessary to check the evacuation, by a few drops of laudanum in each dose.

Happily for mankind, the many frivolous arguments which have been long urged against the use of the bark, are now obviated, by the united consent of the most ingenious physicians; yet there still remains one great prejudice, which prevents the more general administration of it: when a fever has clear and distinct remissions, all practitioners agree in prescribing it; but if the disorder assumes a continued form, means are tried to bring on regular remissions; and if this cannot be accomplished, and the patient's strength begins to sink, blisters, cordials, and sweating medicines, are employed to support him. The use of the bark, in such a situation, would be thought highly dangerous, and has, therefore, been cautiously prohibited by most of the medical writers since Sydenham. But in hot climates, it has been proved by experience, that this objection is without foundation, and that the bark may not only be given with the greatest safety, both in the remissions and the paroxysms, but even when the disease becomes actually continual.

The regimen of the patient requires great attention, the diet ought to be of the most antiputrescent kind; ripe fruit answers very well, both the intention of food and medicine. The panada, sago, and other diet on board ship, should be acidulated, or the drink may be rendered agreeably tart, by cream of tartar, or elixir of vitriol. If the patient begins to be ex-

hausted, and his strength fails, he should be freely supported with wine in his drink, food, and medicines; his linen should be frequently shifted, and his apartment sprinkled with vinegar, and kept as cool and clean as possible. If he should earnestly desire cold water, which is often the case, he may be indulged in it freely, as it will be found to dilute, perhaps, better than any other drink that can be prepared; and it cannot be doubted, but many lives have been sacrificed to the cruel, though friendly practice, of refusing a patient the gratification of his strong cravings: very happy effects have often followed the indulgence of them; and if what is longed for should be very improper, so much of it will never be taken as to do any harm. It has been remarked, that on board of ship, porter, punch, cheese, and ham, are most frequently desired by the sick in fevers; and though these may appear of all things the most improper, yet the allowance of them has often given a favourable turn in very desperate cases.

Most, if not all, of the dangerous diseases of hot climates, particularly fevers, depend upon a disposition in the fluids to

putridity; the diet should, therefore, at all times, but more especially during the rage of sickness, be such as will correct this tendency; and, for this reason, vegetables should bear the greatest proportion. Violent exercise, exposure to the heat of the sun, and to the chilling and unwholesome dews of the night, should be carefully avoided; for they are such certain causes of sickness in hot climates, that those who are exposed to them have little reason to expect an exemption from dangerous indispositions.

These are necessary cautions; but, besides these, keeping the stomach clean, a moderately generous use of wine, and the bark taken daily during the sickly seasons, are great preservatives.

And, under the observation of these directions, it may be affirmed, that the lives of many Europeans would certainly be saved, who are annually carried off by the diseases of hot and unhealthy countries, and in particular by the fever of which we now treat. But if, through a disregard to regimen, or from being exposed to contagion, the symptoms of fever should appear, an emetic, given in time, will often avert the impending danger.

CHAP. XVII.

Of the Putrid and Remitting Marsh Fever of Bengal.

THIS fever, though in many instances analogous to that which we have last described, yet being mentioned as peculiar to a particular part of the East Indies, requires distinct and minute attention; and the following account of it is principally taken from observations made during the epidemic prevalency of this disorder at Bengal, in the years 1762 and 1768.

The symptoms and progress of the disorder are as follows; it generally comes on suddenly, and approaches with a sense of debility, and a very great depression of spirits. These symptoms are attended with a greater or less degree of chilliness, a giddiness, a nausea, acute pains in the head and loins, and irresistible trembling of the hands: the countenance is pale, the skin commonly

commonly dry and rough, the eyes dull and heavy, the pulse quick but small, the breathing generally difficult, and interrupted with violent hiccups.

As the paroxysm increases, the chilliness now and then gives way to irregular heats, which soon become intense and continued; the nausea likewise increases, and in some instances a vomiting comes on, by which a great deal of bile is thrown up, and sometimes bile is also discharged by stool; the skin grows red, the eyes swell, and in some cases appear exceedingly inflamed; the pulse becomes more full, and the breathing more difficult, attended with great restlessness and extreme thirst, notwithstanding which, the nausea is so great that the patient cannot swallow any kind of liquids; the tongue becomes foul, and pains of the head and loins grow more violent: a delirium then follows; a slight moisture appears on the face, and from thence spreads to the other parts, whilst the violence of the other symptoms abates, and foretels the approach of a remission, which is completed by profuse sweats.

On the remission of the fever, the pulse returns almost to it's natural state; but the pains in the head and loins still continue, though somewhat less violent: the nausea and want of appetite also in general remain.

When the disease gains strength, the remission is hardly perceivable, and is almost immediately followed by another paroxysm; which does not, indeed, begin with so great a shivering, but is attended with a greater pain in the head, the extreme anxiety, a heartburn, sickness, vomiting, and bilious stools: what the patient vomits and voids by stool, is most commonly a whitish matter, resembling chalk and water, or the curdled milk which is thrown up by sucking children, when the curd is much broke down.

An intense heat, intolerable thirst, and increased delirium, now come on; the tongue becomes fouler, the teeth and in-

side of the lips are covered with a black crust; the breath grows scalding and foetid; and at this stage another remission ensues, attended with a sweat; but this remission is neither distinguishable, nor of so long continuance as the first.

This second remission is succeeded by a paroxysm, in which the symptoms become still more aggravated than in the former; the matter which the patient discharges by vomiting and purging is more foetid; the black crust not only remains on the mouth, teeth, and inside of the lips, but extends to the tongue, which becomes so dry and stiff, that the patient's voice can scarce be heard, and the delirium, with the restlessness and anxiety, are increased violently during the paroxysm: nor do these symptoms abate till the fever again remits, and the patient begins to sweat.

When the fever becomes so violent during the third fit, as to end in death, which is most commonly the case, some of the sick have a lethargic sleepiness; in others, the delirium grows more violent: the discharges now become more foetid, and of a cadaverous smell; the stools pass away involuntarily; the urine, which at the beginning of the disease is pale, becomes gradually of a deeper colour, but without dropping any sediment; the pulse is so quick, small, and irregular, that it is scarce to be counted, or even perceived; a cold, clammy sweat, spreads over the whole body, especially the head and neck; the face becomes distorted and convulsed; the patient picks the bed-cloaths, and is disturbed by startings and twitchings of his limbs; he lies entirely on his back, and insensibly slides down to the foot of the bed; the extremities grow cold and livid; and he is then seized with strong convulsions, which close the melancholy scene.

Spots seldom appear in this disorder; and the prickly heat on the skin, which was one of the preceding symptoms, vanishes on the first appearance of a fever.

Such

Such is the general appearance of the symptoms; but they vary in different subjects, and at different seasons of the same year. For example, the pulse of some of the patients is quick in the beginning of the disorder, and in others it varies with the other symptoms; the skin of most patients is dry in the beginning of the fit, but in some it is moist, and covered with sweat, from the very first attack of the disease.

During the month of September, when the disorder generally rages most, the remissions are very imperfect and obscure; but on the return of winter, and the healthy season, they become more regular, and the disease frequently takes the appearance of an intermitting fever, to such a degree, as at length not to be distinguished from it: in some, the remissions can scarce be perceived, and the fever continues for a fortnight, without any material change for the better or the worse; and at this time numbers are seized with it. When the disorder continues for any time without a change, it generally ends in death; but when the weather grows better, it sometimes in the space of a few days, from a common fever, becomes an intermitting one, and the patient recovers; unless his liver, which is sometimes the case, happens to be affected. The cure of the inflammation of the liver proves for the most part uncertain and tedious, as it is generally followed by a wasting diarrhoea, which speedily puts an end to the patient's life.

Every succeeding paroxysm is remarked to be more dangerous than the preceding; the third, as before observed, generally proves fatal; some die during the fit: when this happens, the fever, in the language of the country, is called a *puca fever*, which signifies a *strong fever*.

The European seamen are very subject to this fever, when they happen to arrive at Bengal in autumn; the nature of their food predisposes them to it, as well as their confinement on ship-board, the very great heats they are exposed to during the passage, and

their frequently lying for hours together, exposed to the night colds: of these predisposing causes, it may be right to take some notice separately.

As to the diet, most of the meat used by the crews of these ships is salted, and very often in a putrid state, and they are obliged to eat it without a morsel of fresh vegetables, and with only biscuits, pease, and a small addition in some instances of oatmeal: the quantity of wine or spirituous liquors allowed them, is infinitely too small to subdue the putrescent disposition of the animal food, and consequently their fluids become from day to day more and more putrid, and of course, the more apt to breed and contract this disorder.

This disposition to putridity is likewise augmented, by their being stowed very close together for a considerable length of time in a foul air; especially when the weather happens to be so stormy, and the seas so high, that the hatches and port-holes are obliged to be kept shut.

And though the heats which they endure in the passage to India, are by no means so intense as those which they experience on their arrival in that country, yet they are more than an European constitution can well bear. The general heat at sea relaxes them, and promotes a corruption of their humours, and particularly when it concurs with the above causes: it likewise creates a languor and indolence, which alone are sufficient to increase the propensity to putrefaction.

These causes are also apt to be considerably aggravated by the men's being often exposed, when they are on duty, for hours together, to a rainy, damp, and cold air; a circumstance which frequently happens to them when they are working their ships up the river in the night: and by this exposure, the perspiration is checked, and the passage of the useless or unnecessary fluids, which used to be discharged by the skin, being obstructed, and those fluids being retained

retained in the body, contribute exceedingly to the predisposition towards this disease.

Amongst the more remote causes of this disease, the effluvia of marshes replete with putrid animal substances, are reckoned the most powerful; though it does not appear from what kind of putrid animal substances these effluvia derive their virulence: for that every kind of putrefaction has not such an effect is apparent, as neither practical anatomists, nor those who by their trades are exposed to the putrid effluvia of animals, such as tanners or butchers, who generally keep their shops and stalls very dirty, are not more subject than others to putrid diseases; nor are the ship-stewards and others whose business it is to deliver out their provisions to the ship's crews, and who are necessarily confined during great part of every day amongst the putrid and rancid effluvia of store-rooms, or places wherein these provisions are kept, more liable to putrid fevers than the common seamen.

But however this may be, many practical medical writers concur in opinion, that some particular putrid fermentations produce noxious vapours, which, united with those which exhale from the marshes, render them more pernicious. To this cause, therefore, we may safely attribute the sudden and violent complaints with which those have been seized, whose business it has been to bury the dead; and the reason why the inundations of the Nile and Ganges are followed by a healthy season, is, that by these great bodies of water the putrid animal and vegetable substances dispersed over the adjacent countries are swept off into the sea: and, upon the whole, it plainly appears, that putrid animal and vegetable substances are very apt to render the effluvia of fenny places more pernicious than they would otherwise be.

But these noxious vapours, arising from fens, extend but a little way; and it has been often known, that ships crews, at a

very small distance from the shore, remain quite free from this disorder, whilst it is epidemic on the land, and rages with unabated fury. And though these contagious particles, arising from marshy situations, may first bring on the disease, yet it is by infection that it spreads and becomes more highly epidemic. And the crews of Indiamen have frequently continued free from the disorder for weeks together, when they had no communication with the other ships; but as soon as the disease has been brought on board, many have been seized with it within a few days, in such a manner as to leave us no room to entertain the least doubt concerning the pestilential nature of it.

And in the same way the disorder always proves frequent amongst the officers of the ships, and those in garrisons, when they are obliged, by their duty, to be much amongst their men: for, if the disorder was not contagious, these gentlemen might be expected to escape it, from the great care they generally take of themselves, and the means they have in their power to avoid being exposed to what are with so much reason apprehended to be the predisposing, or exciting causes of this disorder. It has been observed, that without suffering by it, persons may accustom themselves to take poison in such large quantities as would occasion instant death to those who are unused to it; and the case is precisely the same with those who constantly reside in countries replete with fenny effluvia, who thereby become so much less obnoxious to be affected by them; and this, too, is the reason that troops newly arrived from Europe sooner fall sick, than those who have been for some time in garrison in the East Indies.

Many persons have been seized by being exposed to the violent heat of the sun; and this may be considered as a very powerful exciting cause of this fever.

And in these hot fenny countries, sudden cold may be reckoned one of the strongest

exciting causes of this disorder, after the marshy particles of infection; and some are of opinion, that cold alone, if the body is sufficiently predisposed, is sufficient to generate a disorder perfectly like that which is produced by the marshy effluvia; perhaps the cold acts by bringing on a debility, and checking the perspiration, by which means the putrid matter, which would otherwise be discharged by the skin, is retained in the body, and produces the fever. But in our enumeration of the occasional and predisposing causes of this fever, we must not omit to mention sleep; for, during this repose, the whole frame is relaxed, and becomes more easy to be affected by noxious particles, than when men are awake and in action: and from this single circumstance of sleeping on shore in marshy places, ships frequently lose great numbers of their hands. And as this occasional cause is so very certain, those captains are inexcusably negligent, who suffer any of their crews to sleep ashore without the most pressing necessity. And on this account, the sick who are suffered to go on shore by day for exercise, and to procure necessaries, should be brought on board ship every night; for being debilitated by their diseases, they become much more susceptible of injury, and liable to dangerous relapses, from sleeping among noxious night-damps.

Those passions and impressions of the mind which enervate the body, such as grief, anxiety, fear, and terror, are also to be reckoned amongst the exciting causes of this disorder; for they all tend to check perspiration, and occasion weakness.

Excesses in eating or drinking, are also to be considered as among the exciting causes of this disease; and it is well known, that when it has been epidemic at Bengal, great numbers have brought it upon themselves by eating too freely of stall-fed beef, whilst the disorder continued to rage.

Relapses are also said to be frequently occasioned by the influences of the sun and

moon, which may therefore be looked on as exciting causes of this disease: and it is remarkable, that a patient who has been recovered for eight or ten days, will be in the greatest danger of a relapse about the time of the rising of the springs; that is, two or three days before the full and change of the moon. There are so many instances of this, and it is so well known at Bengal, that it is absolutely necessary to mention it.

Some instances have occurred, where the patient had only single paroxysms about the time of the moon's change, which may be easily prevented by the administering the bark a few days before the time of it's expected return, and continuing it till that time is elapsed; and in some cases, where it could be done with safety, the fit has been permitted to come on, even four times every full and new moon, in order to ascertain the circumstances of the return of the fits at those times, before the bark has been given to prevent it.

When a great weakness, followed by shiverings, pains in the head and loins, a weak and quick pulse, bilious vomiting and stools, and a hot fit, going off with a plentiful sweat, happen to seize persons in fenny countries, whilst the weather is very sultry, or immediately after the summer heats, at the commencement of the autumnal season, it is certain that the disorder is a marsh fever.

And with regard to the species of this fever, it is evident, from the remissions which almost always occur, and from it's assuming in most cases the appearance of a regular intermitting fever, that it is to be placed in that class; or, if there is any difference, it is to be classed with those which practical writers have called remitting fevers. But there is no necessity for distinguishing between these and intermitting fevers; and they are very different from such as are accompanied with an inflammatory disposition, where remissions are scarce perceivable, and therefore are clearly and unquestionable to be considered as continued fe-

vers.

vers. And if these marsh fevers are to be classed with some particular kind of the intermitting fevers, that of the tertian ague, or fevers, may be the most proper, as they generally appear under that form; when they remit or return at shorter intervals, they resemble, in all respects, the double tertian fevers, or such other fevers as evidently appear to be of the same nature.

The marsh fever may be easily distinguished from those of the malignant and pestilential kind; for when it is generated by fenny effluvia, it is usually accompanied with bilious vomitings and stools, and also with remissions and intermissions, none of which are the symptoms of those fevers.

In the cure of this disease, it will be necessary to allay the violence of the fever, to evacuate the putrid humours, and to check and counteract the tendency of the body to putrefaction, to support the strength of the patient during the paroxysm, and, during the remissions, to lose no time in using proper means to prevent the return of the fit.

To allay the violence of the feverish symptoms, every thing that can contribute to increase them ought to be carefully avoided or removed; such as great heat, too strong a light falling on the eyes, great noise, and violent motion.

When, during the continuance of the paroxysm, the head and loins are affected with violent pains, when the pulse is full and hard, and the heat intense, bleeding may be used, but with the utmost caution: for though this operation is well known to be of the greatest use in cold countries, and has been found of some service even in warm climates, yet the success of this remedy is so far from being certain, that the lives of patients have been frequently brought into much danger by it; and ingenious physicians are of opinion, that where bleeding is found to be at all neces-

sary, it should be performed during the hot fit, and not during the remissions between the paroxysms.

As this fever is produced by an acrid bile, collected in the stomach, if the patient has any inclination to vomit, it should be promoted by draughts of warm water, or tea of emollient herbs.

The acrid bile, in the patient's stomach and intestines, should also be diluted, by cooling acidulated liquors; which will contribute to abate the thirst, lessen the heat of the body, and of course prevent the fever from getting too high: added to which, they also serve to correct the putrid humours. And those liquids are best which are made with some farinaceous substance, such as oatmeal, rice, or the like, which most easily unite with the animal fluids.

These acid liquids, and the juices of the acid and subacid fruits, will prove highly serviceable, and are equally grateful to the palate, answering the purposes of food and medicine.

Chrystals of tartar are also recommended in this disease, and may be either mixed with the patient's common drink, or given with manna, in a decoction of tamarinds, in which form it proves an excellent antiputrescent purge, carrying off the putrid bile by stool; and though it's virtues as an antiputrescent, may not equal those of lime juice, or the fossil acids, yet as it is easily got and administered, when the others are not to be had, it is adviseable for all who are to have the care of ships crews, or garrisons in the warm climates, to provide themselves with a sufficient quantity of it.

The neutral salts, prepared with the juice of lemon, may likewise be given during the hot fit; they serve to lessen the nausea and sickness, to render the paroxysms more regular, and the remissions of longer duration; and they are most grateful, as well as efficacious, when they are administered in a state of fermentation: for this purpose,

purpose, the ordinary saline draughts are frequently prescribed in this work, or the following.

Take of salt of wormwood, half an ounce—of chrystals, or cream of tartar, one ounce and half—of white sugar, two drams. Mix and reduce the whole to a fine powder; and when a saline draught is required, put a dram of this powder into a tea-cupful of water, and give it while the effervescence continues.

It is necessary that the putrid humours should be evacuated during the first remission; but whether this is to be done by purging or vomiting, must be determined by the attending circumstances. If there are no signs of inflammation, vomiting may be proper; and, in that case, five or six grains of ipecacuanha, with from one to two of emetic tartar, may be given; though some advise much smaller doses of these medicines, to be repeated at intervals of two or three hours, without allowing any drink in the mean time, that the medicines may pervade the intestines together, and discharge the bile collected in them by stool and vomit at once.

Nor is the tartar emetic useful only to carry off the putrid humours, it also possesses some kind of febrifuge virtues; so that if small doses of it are continued till it excites a nausea, it not only renders the symptoms more mild, but frequently removes the disorder.

But if any symptoms of inflammation should appear in the bowels, or other internal parts, which sometimes happens when the disorder has been of long continuance, emetics are injurious, and the necessary evacuation of the bile must be performed by purgatives only, which always contribute to the cure of this disease.

Yet acrid and strong purges are poison; and mild antiputrescent ones only should be used, such as chrystals of tartar, and Glauber's salts, with pulp, or decoction of tamarinds, manna, and the like.

A fulness of the vessels, as if the humours were ready to burst them, indicates a necessity for purging, which is also required when there is a disagreeable bitter taste in the mouth, putrid and foetid eructations, costiveness, a tenseness of the belly, rumblings of the guts, and gripings; and purges may be given at any time during the remissions, unless the patient happens to labour under any chilliness or shivering, when they must be omitted.

Infusion or decoction of tamarinds, with chrystals or cream of tartar, may be the patient's common drink, or at least a considerable part of it; and the addition of manna will at any time convert it to a purge, without rendering it nauseous.

It is absolutely necessary to support the patient's strength, and in this disorder proper food is almost of as much importance as medicine. Instances have occurred where several ships have lain together in the same port in India, that whilst the mortality hath been terrible on board some of them, others have escaped with the loss of very few men; and this difference hath arisen entirely from the conduct of the several commanders. Some have humanely taken great care to supply all their companies with necessaries suited to the climate and situation, have attended to the wants of the sick, allotted to them the most airy and wholesome parts of their ships, have divided among them the fresh meats which came to their own tables, and have even given up their houses on shore for the use of the convalescents: nor hath such benevolence been unrewarded, the greater part of their crews have remained healthy, those who were attacked by the disease, have recovered, and they have been enabled to load their ships, and prepare for their return to Europe; whilst those who have been less attentive to these offices of humanity, have lost their passages to England for want of hands to navigate their vessels.

The proper diet for the sick, is panada, sago,

sago, boiled rice, or barley, with currants, raisins, or prunes, and with the addition of a little Port wine or claret and sugar: during the paroxysms, a thin rice gruel acidulated with the juice of fruits and sweetened with sugar, constitutes a pleasant and wholesome drink; and, during the remissions, a little wine may be added, to support them and recruit their strength against the next fit.

The linen of the sick should be frequently changed, and the bedding aired at every convenient opportunity; the foul linen, excrements, and all other filth, should be removed as soon as possible; air should be frequently admitted into the places where the sick are lodged, whether they are on board ship or on shore; and these should be frequently sprinkled with vinegar, and the hot fumes of it dispersed through the apartments: these are matters on which so much depends, that the care of the physician and nurse seem to be equally important.

Blisters are by no means admissible, till the fever has been of long continuance, or the pulse and spirits of the patient begin to fail; learned and ingenious physicians have pointed out the great danger which attends the premature use of them.

But to check this disorder effectually, and restore the patient to health, the bark is the most efficacious remedy that has ever yet been discovered; nor can this medicine be administered too early to secure the patient from the danger which attends him in every paroxysm, and to remove those internal obstructions, which, though they have been mistakenly attributed to the use of the bark, are actually the effects of the disease; during the second remission, after the first passages have been cleared, this medicine may be administered with safety, nor is it prudent to delay giving it longer.

Yet, as we have before observed, the necessary evacuations, and in particular that of purging, must precede the use of the bark;

for, if ever that medicine fails to relieve in this disease, the want of success is owing to the coming on of a diarrhoea or vomiting during the remission of the fever, and before a sufficient quantity of bark can be taken to prevent its return; but such consequences may frequently be avoided, by adding to each dose of the medicine, from five drops to ten of liquid laudanum, which will assist the retention of the bark on the stomach, and check any propensity it may have to run off by stool.

The ordinary way of administering the Peruvian bark in this disease, is in doses of a dram of the powder, repeated as often during the remissions as the stomach of the patient will bear them, in a wine-glass of water; though some have recommended small-beer well hopped as a better vehicle, as it more effectually deprives this medicine of its disagreeable taste: and the first dose should be administered as soon as the fever abates, and the pulse returns to its natural state; both which generally take place before the sweat ceases.

An ounce of bark, administered in this manner at intervals, will in general be sufficient to give a check to the fever; though it may sometimes require an ounce and half, and this quantity seldom fails: and after the disease is in a great measure removed, the same medicine should be continued in small doses daily, till the patient has regained his strength; and afterwards larger quantities may be given, and in particular at the approach of the rains, or the overflow of the rivers, at which seasons the influence of the sun and moon are apt to occasion relapses.

In cold climates, the hasty prescription of the bark is so far from being of use to check fevers, that it very often brings on extreme danger; and this may be attributed to the inflammatory disposition which accompanies most fevers in these countries: but in warmer climates, where the general tendency is to putridity and not to inflammation,

tion, the bark cannot be offered too soon; nay, when putrid fevers have prevailed, it has been found absolutely necessary to attempt stopping the mortality, by administering the bark during the paroxysm, an expedient which hath been attended with great success.

And, as a preparative for this excellent medicine, some experienced physicians have recommended from twenty to thirty drops of liquid laudanum, to be taken about an hour after the commencement of the hot fit; which has been found to afford immediate relief, shortening the fit, allaying the head-ache, bringing on a profuse sweat, by

which the heat of the fever is abated, and frequently producing a sweet and refreshing sleep, from which the patient hath awaked in a great measure free from his complaints; and the paroxysm being thus mitigated, is much less dangerous and injurious.

It may be necessary to observe, that the food of those who recover from this fever, should be peculiarly attended to, whilst they remain in a convalescent state; in particular, great care should be taken not to indulge them in an early use of animal food, which is of all other acts of imprudence most likely to occasion a relapse.

C H A P. XVIII.

Of the Rheumatism of the East Indies.

THIS disease is by no means frequent in hot climates; yet it sometimes attacks common seamen, from their getting wet, or sleeping upon deck in the night dews: it is sometimes also the consequence of the remitting fever, or dysentery. In the first case, it is generally acute, or accompanied with a degree of fever; but in the last it is always chronic.

In the *acute rheumatism*, if the symptoms of inflammation run high, bleeding is necessary. The patient ought to be confined to a cool regimen, and a free perspiration should be kept up by diluting liquors and small doses of emetic tartar, as recommended in the remitting fever; if the pains become fixed to the joints, blisters are of great use, and seldom fail to remove the complaint; and when the chronic rheumatism is the consequence of long continued fevers, or obstinate fluxes, the disease is in almost all cases cured by sweating the patient with small doses of ipecacuanha and

opium, or by Dover's powder; which, however, ought not to be continued for any length of time, as it reduces the patient's strength too much: but, after a while, this course should be omitted for two or three days, and then begun again; taking once or twice a week, especially when costive, as much gum guaiacum as will gently move the belly.

When the pains have continued obstinately fixed, the greatest advantage hath been in many instances experienced from the application of a volatile liniment and warm plaster; and when by these means the pains are removed, the Peruvian bark, and the use of the cold bath, will seldom fail to compleat the cure, and to confirm the health of the patient.

Some cases of the *chronic rheumatism* occur, where the pains are confined to particular parts of the body, as the shoulder, the joints of the knees and arms, which have resisted every remedy, till at last the disease

disease has been totally and expeditiously removed by rubbing mercurial ointment upon the parts affected, and giving the common mercurial pill at the same time: but as a salivation generally renders the cure more incomplete, these medicines should be laid aside before they produce this effect.

From the success which has attended this practice, it might be conjectured, that this rheumatism is frequently joined with venereal pains; but it has been found as effectual in instances where there was no reason to suspect any taint of the kind.

C H A P. XIX.

Of the Plague.

IT is the opinion of eminent physicians and historians, that this fatal disorder was originally bred in the hot climates of Egypt or Ethiopia; and, as well as the small-pox, was brought into Europe and Asia by the communications of war or commerce; (into the former it was most probably conveyed by means of the war with the Saracens, commonly called Crusades, or Holy Wars, at the latter end of the eleventh and the beginning of the twelfth centuries;) and that from these times the contagious seeds of it have been preserved in the cloaths and furniture of infected persons and houses, and it has burst out in various countries, at different times, as the spreading and exerting it's force has been favoured by a moist and warm temperature of the air.

In the earliest ages, when this disease was chiefly confined to the southern or south-east quarters of the world, it was considered as a scourge in the hands of Divine Justice, to punish the wickedness of mankind; and, instead of having recourse to precautions for the prevention, and medicine for the removal of it, the immediate visitation of Heaven, was only to be relieved by the efficacy of prayers, lustrations, and sacrifices.

But, though this opinion is justified by the assurances of Holy Writ, yet speculations of this kind should by no means be encouraged, as they tend to obstruct enquiries into natural causes, and promote a supine submission to evils, for the averting and removing which the wise and benevolent Author of Nature has in almost all cases provided remedies.

And, indeed, when the narrow ideas of particular vengeance, vanished before more liberal and expanded notions of religion, and when the knowledge of nature became a necessary qualification for the practice and profession of physic, even the heathens themselves opposed the doctrine that some particular diseases were divine, or sent immediately from the gods; and urged, that no one disease was more properly sent from the gods than others, that all came from them, and all owned their proper natural causes; that the heat and cold, and the winds, were all divine, from the changes of which, and their influence on the human body, most disorders might be deduced; and that it was in these natural causes physicians ought to seek for the origins of the various maladies which fell under their observations.

But before we proceed to enquire into the

the causes of this dreaded disease, it may be right to mention an opinion which once prevailed, that the degree of violence with which it rages, constitutes the only difference between the plague and other fevers; an opinion which requires no other refutation, than a comparison of it's symptoms with those of the small-pox and measles, which have been long acknowledged to be distempers distinct in kind from all others, and which may each of them be also said to be plagues of a particular species.

The small-pox discharges itself by eruptions or pustules, raised on the skin; and the noxious humour of the plague is either brought to the surface by tumours, or buboes in the glands, or by carbuncles in different parts of the body; and such specific marks of this distemper are these eruptions, that it is never unaccompanied with some one or other of them, unless the progress of the disease is so rapid, or the patient is so exhausted by previous indisposition or weakness, that he sinks before there has been time for the discharge to be made in this way, and the matter which should have been expelled by these external issues falls upon the internals and produces mortifications: and this case happens also frequently in the small-pox, in tender or debilitated constitutions, where it proves fatal before the eruption can take place, either by a diarrhoea an hæmorrhage, or some such effect, or the morbid dispositions prevailing in the blood and juices.

When this disease raged with horrid malignity at Marseilles, the physicians of that place distinguished the sick into five different classes, according to the degrees or stages of the distemper; every one of which, except the first, was marked by tumours, buboes, or carbuncles, and those of the first class were seized with such violent symptoms (yet corresponding with those of others, in whom they were less aggravated) that they died in a few hours, or at farthest in a day or two, of the faintness, oppression and anxiety,

into which they were thrown by the first shock of the disease; unquestionably, of mortifications in the intestines, as was apparent by the dissection of several of them: and the same event is not only common in the small-pox, as we have before observed, but even in the measles; for in both these disorders, the patient often dies of the violence of the attack, before any eruption appears on the skin.

And this also shews the difference between the true plague and those fevers of extraordinary malignity, which are the usual fore-runners of it, and are the natural consequence of that ill state of air which certainly attends all visitations of the plague. For since all those fevers from which people recover without any discharge by tumours in the glands, or by carbuncles, want the characteristic signs which accompany the slightest cases of the true plague, it cannot be concluded upon any just ground, that they are only a less degree of that distemper: on the contrary, we have reason to be satisfied that they are of a very different nature; not ordinarily contagious like the plague, nor have any such necessary relation to it, but that such fevers do frequently appear without being followed by a real pestilence.

On the other hand, every fever is not to be called a plague, which is followed by eruptions resembling those above-mentioned: for, as every boil or pustule which breaks out upon the skin is not an indication of the small-pox, nor every swelling in the groin a venereal bubo; so there are carbuncles not pestilential, and other fevers besides the plague which have their crisis by tumours and abscesses, and that sometimes even in the parotid or other glands. There is, indeed, usually some difference between these swellings in the plague, and in other fevers, especially in the time of their coming out; for, in the plague, they discover themselves sooner than in most other cases. But the principal difference between these diseases,

diseases is, that the plague is infectious, the other not, at least not to any considerable degree.

And this leads to another characterising system of this disease, by which it is distinguished from common fevers; and this is the contagion certainly accompanying it.

Indeed, this symptom is so evident, that it is at present the current opinion of all mankind, and needs no other proof than the historical accounts of this fatal disease.

Yet it is true that some have not been attacked by the disease, though constantly attending about the sick: but this is no proof that it is not infectious; for it is as easily understood how some persons, by a particular advantage of constitution, should resist infection, as how they should constantly breathe a noxious air without hurt. And an observation of a certain medical writer deserves notice in this place: that part of a family removed into a town free from the plague, was observed by him to be taken ill of it soon after the part left behind in the diseased town fell sick; which certainly could not have happened, unless a communication between the healthy and the sick, by letters or otherwise, was the occasion of it. And a circumstance of the same nature is recorded by another writer on the plague: that many of those who left infected places, were seized with the plague in the towns to which they had retired, while the old inhabitants of those towns were free from the disease. And, indeed, all the appearances attending this disorder are very easily explained upon this principle of infection, and are hardly to be accounted for upon any other. And hence we learn the reason why, when the plague makes it's first appearance in any place, though the number of sick is exceeding small, yet the disease usually operates upon them in the most violent manner, and is attended with it's very worst symptoms; but if the disease was not produced by imported contagion, but from some cause which had it's original in the diseased place, and consequently from a

cause gradually bred, the contrary must happen: the diseased would at first not only be few in number, but their sickness likewise more moderate than afterwards, when the morbid causes were raised to their greatest malignity. From the same principle, we see the reason why people have often remained in safety in a diseased town, only by shutting themselves up from all communication with such as might be suspected of giving them the disease; and when the plague was last in England, while it was in the town of Cambridge, the colleges remained entirely free by using this precaution. In the plague at Rome, in the years 1656 and 1657, the monasteries and nunneries for the most part defended themselves by the same means: whereas, at Naples, where the plague was a little before, these religious houses, from their neglect in this respect, did not escape so well. Nay, the infection entered none of the prisons at Rome, though the nastiness of those places exposes them so much to every kind of pestilential disease: and to add one instance more; there is no other means of explaining how the last plague in the city of London, which broke out in the parish of St. Giles, in the Fields, towards the latter end of the year 1664, should lie asleep from Christmas to the middle of February, and then break out again in the same parish; and after another long rest till April, shew itself again exactly in the same place.

Whoever examines those histories of plagues, in all times, which have described them with any tolerable exactness, will find very few that do not agree in these essential marks, by which the plague may be distinguished from other fevers, notwithstanding an instance or two may be found to the contrary; of which, perhaps, the history of our own country furnishes the most remarkable; but examples of this kind are so very rare, that the plague must be admitted to be usually one and the same distemper.

Nor will it be difficult to prove, that the

plague has always the same original, and is brought from Africa; a quarter of the world to which we are indebted for two other infectious distempers, the small-pox and measles; in all countries, indeed, very mortal epidemic diseases are frequently bred in gaols, sieges, and camps, which authors have often in a large sense called pestilential; but the true plague, which is attended with the distinguishing symptoms before described, and which spreads from country to country, is unquestionably an African fever, bred in *Æthiopia* or *Egypt*, and the infection of it carried by trade into the other parts of the world.

In all ancient history, there is no account of any plague so dreadful as that which broke out in *Constantinople* in the time of the Emperor *Justinian*, in the year 543: this is said to have spread it's infection over all the earth, and to have lasted fifty-two years; the history of it is well described by two historians of credit, and they both observe, that the distemper had it's birth in *Æthiopia* or *Egypt*.

This opinion is also agreeable to the modern relations of travellers and merchants from *Turkey*; who, without exception, assert that the frequent plagues which depopulate that country, are brought thither from the coast of *Africa*; so that at *Smyrna*, and other ports of that coast, they often know the very ship which brings it; and since the European trade with *Turkey* has been pretty constant, the plagues in these western parts of *Europe* have evidently been brought from thence.

The last plague in *France* came indisputably from *Turkey*; that which broke out at *Dantzick*, in the year 1709, and spread from thence to *Hamburgh*, *Copenhagen*, and other cities in the north, made it's way thither from *Constantinople*, through *Poland*; and the last plague in this city, had the same original, being brought immediately to us from *Holland*, but communicated

to that country by cotton imported from *Turkey*.

The greatest mortality that has happened in later ages, was about the middle of the fourteenth century, when the plague seized country after country for five years together. In the year 1346, it raged in *Egypt*, *Turkey*, *Greece*, *Syria*, and the *East-Indies*; in 1347, some ships from the *Levant* carried it into *Sicily*, *Pisara*, *Genoa*, and other parts of *Italy*; in 1348, it got into *Savoy*, *Provence*, *Dauphiny*, *Catalonia*, and *Castile*; in 1349, it seized *England*, *Scotland*, *Ireland*, and *Flanders*; and the next year prevailed in *Germany*, *Hungary*, and *Denmark*: and in all places where it came, it made such heavy destruction, that it is said to have dispeopled the earth of more than half it's inhabitants; and since *Africa* had a share of this plague in the very beginning, it cannot be doubted but it had it's first rise in that country, and not *China*, as some historians of those times have represented, from the report of *Genoese* seamen, who came from these parts of *Asia*, and pretended it was occasioned there by a ball of fire, which either burst out of the earth, or fell down from heaven; but this relation is too absurd to need contradiction.

It is very remarkable, that the several countries of *Europe* have always suffered more or less in this way, according as they have had a greater or lesser commerce with *Africa*, or with those parts of the east that have traded thither; an observation which may also help to solve a difficulty concerning the great increase of people among the northern nations in ancient times more than at present; for in those ages they had no communication at all with *Africa*, and therefore were not wasted with plagues as they have been since.

As the people of *Marseilles*, from the first foundation of their city, were famous for trade, and made long voyages southwards on the coast of *Africa*; so they have in all times been very liable to the plague. A
French

French author, in a history of the last plague at Marseilles, enumerates twenty plagues which have happened in that city; notwithstanding it is by it's situation one of the most healthy and pleasant places in France, and the least subject to epidemic distempers; but if we had no records of this in history, a custom among them mentioned by writers of antiquity, by the observance of which they hoped to clear themselves from this distemper; would be a proof of it. According to these accounts, some indigent person offered himself to be maintained at the public expence with delicate food for a whole year; at the end of which he was led about the city dressed in consecrated garments, and decked with herbs, and being loaded with curses as he went along, that the evils of the citizen might fall upon him, he was at last thrown into the sea.

Having shewn that the plague is a disease communicated by infection, and that it takes it's rise principally, if not wholly, in Africa; it may not be uninteresting to consider what there is peculiar to that country, which can reasonably be supposed capable of producing it; and to this purpose it will be necessary to describe shortly, the state of Grand Cairo in Egypt, and of Æthiopia, the two great seminaries of the plague, so far as it relates to the production of this disorder; travellers agree that these countries are more infected with it than most other parts of Africa.

Grand Cairo is crowded with vast numbers of inhabitants; who for the most part live poorly and nastily; the streets are narrow and close; it is situate in a sandy plain, at the foot of a mountain, which, by keeping off the winds that would refresh the air, makes the heats very suffocating; through the midst of it passes a great canal, which is overflowed with water at the rising of the Nile, and after that river is decreased, gradually dries up; into this canal the people throw all manner of filth and putrified carcasses, so that the stench which arises from

these offensive bodies, and the mud together, is insufferably offensive; and under these circumstances the plague almost every year preys upon the inhabitants, and is only stopped when the Nile, by overflowing again, washes away this load of filth; the cold winds, which set in at the same time, lending their assistance by purifying the air.

In Æthiopia, those prodigious swarms of locusts, which at some times devouring the fruits of the earth, cause an actual famine, unless they happen to be carried by the winds clearly off into the sea, are observed to entail a new mischief upon the country, when they die and rot, by raising a pestilence; the putrefaction being heightened by the excessive intemperance of the climate, which is so very great in this country, that it is infested with violent rains at one season of the year, for three or four months together; and it is particularly observed of this country, that the plague usually invades it whenever rains fall during the sultry heats of July and August.

And, if we consider all circumstances, and compare them together, we shall be fully instructed in the usual causes of this disease, which may be justly attributed to the putrefaction so constantly generated in these countries; when that is heightened and increased by the ill state of air now described, and especially by the putrefaction of animal substances.

It is very plain, that animal bodies are capable of being altered into a matter fit to breed this disease; because this is the case of every one who is sick of it, his humours being corrupted into a substance, which will infect others: and it is not improbable, that the volatile parts with which animals abound, may in some ill states of air in the sultry heats of Africa, be converted by putrefaction into a substance of the same kind; since in these colder regions, we sometimes find they contract a greater degree of acrimony by putrefaction than most other substances, and are more dangerous for men to

come

come within the reach of their action; so that animal putrefaction sometimes produces in these northern climates very fatal distempers, though they do not arise to the malignity of the true plague; for, as has been already observed, such fevers are often bred where a large number of people are closely confined together in gaols, garrisons, and camps.

And so sensible were the Egyptians of old how much the putridity of dead animals contributed towards breeding the plague, that they worshipped the bird ibis, for the service it did in devouring great numbers of serpents, which they observed were as noxious by their stench when they died, as by their bite when alive.

But no kind of putrefaction is ever heightened in these European countries to a degree capable of producing the true plague; and there is no doubt but that some indisposition of the air is necessary in the hottest climates, either to cause so exalted a corruption of animal substances, or at least to inforce upon men's bodies the action of the effluvia exhaled from them whilst they putrify; both which effects may well be expected from the sensible ill qualities of the air before described, whenever they continue and exert their force together for any considerable length of time.

But whatever be the cause of the plague, it is of a nature which, when taken into the body, works such changes in the blood and juices, as to produce this disease, by suddenly giving some parts of the humours such corrosive qualities, that they either excite inward inflammations and gangrenes, or push out carbuncles and buboes, the matter of which, when suppurated, communicates the like disease to others, in a manner which will be hereafter described.

It has been necessary to trace thus particularly the first origin of the plague, to remove as much as possible every objection against what is intended to be said respecting the causes by which it is excited and pro-

pagated in this country: and this is done by contagion. Those who are unacquainted with the full power of this, and who do not understand how subtle it is, and how widely the distemper may be spread by infection, ascribe the rise of it wholly to the malignant quality of the air in all places where it happens; and some, on the contrary, have imagined that the consideration of the infectious nature of the disease must necessarily exclude all regard to the influence of the air: whereas, in truth, the contagion accompanying the disease, and the disposition of the air to promote that contagion, ought equally to be considered.

The causes which spread the plague, are reducible to three; diseased persons, goods transported from infected places, and a corrupted state of air.

There are several diseases which will be communicated from the sick to others; and this not after the same manner in all. The hydrophobia is communicated no other way than by mixing the morbid juices of the diseased animal immediately with the blood of the sound, by a bite, or some similar conveyance; the itch is given by simple contact; the lues venerea not without a more intimate connection: but the measles, small-pox, and plague, are caught merely by a near approach to the person infected; for, in these three last diseases, residing in the same house, or conversing with the sick, is sufficient to obtain the distemper.

Now it appears from repeated experiments of giving the plague to dogs, by putting the bile, blood or urine, from infected persons, into their veins, that the whole mass of the animal fluids is in this disease highly corrupted and putrified. It is therefore easy to conceive, how the effluvia or fumes from liquors so affected may taint the ambient air; particularly at the height of the fever, when the humours are in the greatest fermentation: as it is observed of fermenting liquors, which towards the conclusion of their intestine motion

tion throw off a great quantity of their most subtile and active particles. And this discharge will chiefly be made upon those glands of the body, in which the secretions are the most copious, and the easiest increased; such as those of the mouth and skin. From these, therefore, the air becomes impregnated with pestiferous atoms; which being taken into the body of a sound person, and acting in nature of a ferment, put the fluids there into the like agitation and disorder.

These pestiferous atoms are received into the body two ways: by the breath, and by the skin; but chiefly by the breath.

It seems certain, that respiration always communicates to the blood some parts from the air: which is proved from observing, that the same quantity of air will not suffice long for breathing, though it be not deprived of those qualities by which it is fitted to inflate the lungs and agitate the blood, the uses commonly ascribed to it. And this is farther confirmed by the relation of a learned and eminent gentleman, who being several fathoms under water in a diving-engine, and breathing an air much more condensed than the natural, took notice that he breathed slower than usual: from which it appears, that this conveying to the blood some subtile parts from the air, is the chief use of respiration; since, when a greater quantity of air than usual was taken in at a time, and consequently more of these subtile parts received at once by the blood, a less frequent respiration sufficed.

As to the skin, since there is a continual discharge made through its innumerable pores, of the matter of insensible perspiration and sweat; the same passages will undoubtedly admit subtile corpuscles, which may penetrate inward similar to what we observe on the outward application of ointments and warm bathings, which have their effects by the finest and most active parts insinuating themselves into the blood.

It has been commonly thought, that the blood only is affected in these cases by the morbid effluvia: but there is another fluid in the body, equally, if not more, subject to the infection, especially in the beginning; that is, the liquid of the nerves, usually called the animal spirits. As this is the immediate instrument of all motion and sensation, and has a great agency in all the glandular secretions, and in the circulation of the blood itself, any considerable alteration therein must be attended with dangerous consequences. It is impossible that the whole mass of blood should be corrupted in so short a time as that in which the fatal symptoms frequently discover themselves. Those patients of the first class, mentioned in the beginning of this chapter, particularly the porters who opened the infected bales of goods in the Lazarettos of Marseilles, died on the first appearance of infection, as it were by a sudden stroke; being seized with rigors, tremblings, heart-sickness, vomitings, giddiness and heaviness of the head, an universal languor and inquietude, and a low unequal pulse, and death sometimes ensued in a few hours.

Such sudden effects must doubtless be owing to the action of some corpuscles of great force, insinuated into, and changing the properties of, another subtile and active fluid in the body: and such, certainly, is the nervous liquor.

Though it is not to be expected we should be able to explain the particular manner by which this effect is brought about, (from the confined limits of all human understanding, respecting the frame of the universe, and the laws of attractions, repulsions and cohesions, among the minutest parcels of matter, and the means by which they affect each other, especially within animal bodies, the most delicate and complicated of all the known works of nature) yet we may perhaps make a probable conjecture.

It is by no means improbable, that the
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animal spirits are a thin liquor, separated in the brain, and from thence derived into the nerves, of such a nature that it admits, and has incorporated with it, a great quantity of this elastic fluid, which makes it a vital substance of great energy. And a liquor of this kind must be very susceptible of alterations from other active bodies of a different nature from it, if they approach to and are mixed with it: as we see some chemical spirits, on their being put together, fall into a fermentation, and make a composition of a quite different kind.

If, therefore, the effluvia or exhalations from a corrupted mass of humours in a body that has the plague are allowed to be volatile and fiery particles, carrying with them the qualities of those fermenting juices from which they proceed; it will not be hard to conceive how these may, when received into the nervous fluid of a sound person, excite in it such intestine motions as may make it partake of their own properties, and become more unfit for the purposes of the animal oeconomy.

This is one reason why the plague, when once bred, spreads and increases; but the second cause, that of goods brought from infected places, extends the mischief much wider. By the first, the plague may be spread from person to person, from house to house, or perhaps from town to town, though not to any great distance; but this carries it into the remotest regions. Hence the trading parts of Europe derive their principal apprehensions, and have universally provided for their security by the institution of quarantines.

It has been thought so difficult to explain the manner in which goods retain the seeds of contagion, that some writers have imagined infection to be performed by means of insects; whose eggs being conveyed from place to place, formed the disease when they came to be hatched. But this is a supposition grounded on no sort of observation, nor is there the least need to have re-

course to it. If, as has been conjectured, the matter of contagion be an active substance generated chiefly from animal corruption, it is certainly not hard to conceive how this may be lodged and preserved in soft porous bodies, which are kept closely pressed and confined together.

Every body knows how long perfumes retain their scent, if wrapt up in proper coverings: and it is remarkable, that the strongest of these, like the matter of which we now treat, are chiefly animal juices, such as musk, civet, and the like; and that the substances found most fit to preserve them in, are the very same with those which are most apt to receive and communicate infection, as furs, feathers, silk, hair, wool, cotton, and flax, the greatest part of which are likewise of the animal kind.

Indeed, there is nothing from which we can obtain so just a notion of infection, or which can more clearly represent the manner of its operation, than odoriferous bodies. Some of these most astonishingly revive the animal spirits; while others instantaneously depress and sink them: we may therefore easily conceive, that the active particles of pestiferous bodies may act in a similar manner with those of such substances as have been mentioned; so that contagion is no more than the effect of volatile offensive matter drawn into the body by the sense of smelling.

The third cause assigned for the spreading of contagion, is a corrupted state of air. And although the air be in a proper state, yet a sick person may infect those who are near him: as we find the pestilence sometimes continue among the crew of a ship, after they have sailed out of the infectious air in which the disease was at first contracted. A remarkable accident of this nature happened in the plague at Genoa, in 1656; where eleven persons put to sea in a felucca, with design to withdraw themselves from the contagion, and retire into

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Provence: but one of them falling sick of the plague soon after they had embarked, infected the rest; and others being taken ill, and dying in their turns, they were every where refused admittance, and forced to return from whence they came; so that by the time the boat arrived again at Genoa only one survived.

In this case, however, the malady does not usually spread far, the contagious particles being soon dispersed and lost. But when in a corrupt disposition of the air the contagious particles meet with the subtle parts generated by such corruption, and unite with them, they become much more active and powerful, as well as of a more durable nature; forming an infectious matter capable of conveying the mischief to a greater distance from the diseased body out of which it was produced.

In general, a hot air is more disposed to spread contagion than a cold one; as cannot be doubted by those who consider how much farther all kinds of effluvia are diffused in a warm than in a cold air. And that state of air, when unseasonable moisture and want of winds are added to it's heat, which gives birth to the plague in some countries, will no doubt promote it in all: for Hippocrates gives the same description of a pestilential state of air in his country, as that to which the Arabians attribute the rise of the plague in Africa. Besides, it is easy to shew how the air, by the sensible ill qualities already noticed, should favour contagious diseases, by rendering the body obnoxious to their effects.

Indeed, other hurtful qualities of the air are more to be regarded than the mere heat: for the plague is sometimes stopped while the heat of the season increases, on the amendment of the air in other respects. At Smyrna, in particular, where the plague is constantly carried every year, by ships; it always ceases about the 24th of June, owing to the dry and clear weather they at that time enjoy, the unwholesome damps

that annoy the country in the spring being then wholly dissipated. The heat of the air is, however, of so much consequence, that if any ship brings the infection in the winter months of November, December, January, or February, it never spreads; whereas, if it is brought later in the year, as in April or afterwards, it continues till the before-mentioned time.

What has been said of some latent disorders in the air having a share in spreading the plague, will likewise have place in these countries; as the last plague in the city of London remarkably proves, the seeds of which, on it's first entrance, and while it was confined to a house or two, preserved themselves through a hard frosty winter, and again put forth their malignant quality as soon as the warmth of the spring gave them strength: but at the latter end of the next winter they were suppressed so as not to appear again, though in the month of December more than half the parishes of the city were infected.

A corrupted state of air is no doubt necessary to give these contagious atoms their full force; for otherwise it would be difficult to conceive how the plague, when once it had seized any place, should ever cease but with the destruction of all the inhabitants: which is, however, readily accounted for, by supposing an amendment of the qualities of the air, and it's restoration to a healthful state, capable of dissipating and suppressing the malignity.

On the other hand, it does not appear that the air, however corrupted, is usually capable of carrying infection to a very great distance; for the plague is commonly spread from town to town by infected persons and goods: and there are numberless instances, where the plague has caused a great mortality in some towns, while other towns and villages very near them have wholly escaped it. And hence it is, that the plague sometimes spreads from place to place very irregularly. An historian of good authority mentions.

mentions a plague in Italy, which one year was at Trent and Verona, and the next got into Venice and Padua; leaving Vicenza, an intermediate place, entirely free from infection, though the next year that also felt the like dreadful calamity: a sufficient proof that the plague was not carried by the air from Verona to Padua and Venice; for the infected air must have tainted all in it's passage. We have had in France an instance of the same nature, where the plague was carried at once out of Provence several leagues into the Gevaudan. Usually, indeed, the plague, especially when more violent than ordinary, spreads from infected places into those which border upon them: but this, no doubt, is sometimes effected by such little communications as are obliged to be held for the sake of necessities, the subtilty of the venom now and then eluding the greatest precautions; and at others, by such as withdraw themselves from infected places into the neighbourhood.

It cannot, it is true, be demonstrated, that when the plague makes great ravage in any town, the sick shall never be so numerous as to load the air with a sufficient quantity of infectious effluvia, to be conveyed by the winds without dispersing so as to prevent any ill effects, into a neighbouring town or village; especially, as it is by no means unusual for the air to be so charged with these noxious atoms, as to prevent any part of the infected town from being at all secure; so that when the distemper is at it's height, all become infected, as well those who keep from the sick, as those who are near them; but, at the beginning of a plague, to avoid all communication with the diseased, is an effectual defence. However, this is not often the case: just as the smoke, with which the air of the city of London is constantly impregnated, especially in winter, is not carried many miles distant; though the quantity of it is considerably more than the quantity of

infectious effluvia that the most mortal plague can well be supposed to generate.

But, since the ill qualities of the air in these northern countries, are clearly insufficient to excite the plague, without imported contagion, the error of a common opinion, countenanced by certain authors of great repute, that we are necessarily visited with the plague once in thirty or forty years, is certainly a mere chimera, without foundation either in reason or experience, and ought to be universally exploded. As the pestilence is never originally bred with us, but always brought accidentally from foreign countries, it's coming can have no possible relation to any certain period of time: and although our three or four last plagues have fallen out nearly at such intervals, yet that is much too short a compass of years to be any foundation for a general rule; and we have accordingly seen that upwards of a century has elapsed without any such calamity.

The air of our climate is, indeed, so far from being ever the original of the true plague, that it probably never produces even those milder infectious distempers, the small-pox and measles: for these diseases were not heard of in Europe before the Moors had entered Spain; and they were afterwards propagated and spread through all nations, chiefly by means of the wars with the Saracens.

And so far are we from any necessity of these periodical returns of the plague, that, on the contrary, though we have had several strokes of this kind, yet there are instances of bad contagions from abroad being brought over to us, which, when our northern air has not been disposed to receive such impressions, have proved less malignant here.

The *sweating sickness*, before hinted at, called *sudor Anglicus*, and *febris ephemera Britannica*, because it was commonly thought to have taken it's rise in this country,

country, was most probably of a foreign original; and though not the common plague, with glandular tumors and carbuncles, yet a real pestilence from the same cause, only altered in it's appearance, and abated in it's violence, by the salutary influence of our climate: for it preserved an agreement with the common plague in many of it's symptoms, as excessive faintness, inquietudes, and inward burnings; these symptoms being no where observed in so intense a degree as they are described to have been, except in the true plague; and, what is much more, it was likewise a contagious disease.

The first time this was felt here, which was in the year 1485, it began in the army that came from France and landed in Wales with King Henry the Seventh; and is by some supposed to have been brought from the famous siege of Rhodes by the Turks, three or four years before.

Besides, of the several returns which this disease has made since that time, viz. in the years 1506, 1517, 1528, and 1551; that in the year 1528, may reasonably be suspected to have owed it's origin to the common pestilence which at those times raged in Italy, as a celebrated historian has long ago conjectured; and the others were very probably from a Turkish infection: if, at least, some of these returns were not owing to the remains of former attacks, a suitable constitution of air returning to put the latent seeds in action before they were quite destroyed. And it is the more probable that this disease was owing to imported contagion; because we are assured, that this form of the sickness was not peculiar to our island, but that it made great destruction, with the same symptoms, in Germany and other countries.

This distemper is properly denominated a plague with lessened force; because, though it's carrying off thousands for want of right management was a proof of it's malignity; (which, indeed, in one respect,

exceeded that of the common plague itself, for few who were destroyed with it survived the seizure above a single day) yet it's going off safely with profuse sweats in twenty-four hours, when due care was taken to promote that evacuation, proved it to be what a learned and judicious historian calls it, *rather a surprize to nature, than obstinate to remedies*; who assigns this reason for expressing himself thus, that if the patient was kept warm with temperate cordials, he commonly recovered. What seems yet more remarkable, sweating, which was the natural crisis of this distemper, has been found by great physicians the best remedy against the common plague; and, when timely used, that distemper may sometimes be carried off by this means, without any external tumors. And a judicious writer says, that in many of his patients, when he had subdued the violence of the distemper by an artificial sweat, a natural one would frequently break forth and prove exceedingly refreshing.

And, as a confirmation of what has been advanced, we had in England, about September 1713, the same kind of fever as then raged at Dunkirk, and which, being brought over by our soldiers from that place, was thence called the Dunkirk fever; (though probably it had it's origin from the plague, which a few years before broke out at Dantzick, and continued some time among the cities of the north:) with us this fever began only with a pain in the head, and went off in large sweats usually after a day's confinement; but at Dunkirk it was attended with the additional symptoms of vomiting and diarrhoea.

On the whole, it appears very plainly, that the plague is a real poison, which being bred in the southern parts of the world, is carried by commerce into other countries, particularly Turkey, where it maintains itself by a kind of circulation from persons to goods, which is chiefly owing to the negligence of the people

there, who are stupidly careless about it; that when the constitution of the air happens to favour infection, it rages there with great violence; that at that time more particularly diseased persons spread the infection, and from them contagious matter is lodged in goods of a loose and soft texture, which being packed up and carried into other countries, let out, when opened, the imprisoned seeds of contagion, and produce the disease whenever the air is disposed to give them force, but otherwise dissipate without any considerable ill effects; and, lastly, that the air does not usually diffuse and spread the contagion to any great distance, if intercourse and commerce with the place infected be strictly prevented.

As it is an undoubted satisfaction, to know that the plague is not a native of our country, so is this consideration a most powerful inducement for us to make use of every exertion which may tend to preserve us from all the horrors of so dreadful a calamity.

For this purpose, two cautions are particularly necessary: the one, to prevent it's being brought into our island; the other, should such a calamity happen, to put a stop to it's spreading among us.

The first of these is provided for by the established method of obliging ships from infected places to perform quarantine; respecting which the following rules seem necessary to be observed.

Contiguous to our several ports, lazarettos should be built in convenient places, (if possible, on little islands) for the reception both of persons and goods arriving from places suspected of infection. Keeping men in quarantine on board the ship is by no means sufficient; nor is it easy to discover what other advantage can attend such a practice, than merely to know whether any of them die: for infection may be preserved so long in any apparel wherein it is once lodged, that more of it, if sickness

continues in the ship, may be brought on shore at the end than at the beginning of the forty days; unless a new quarantine were to commence every time any person dies, which would then have no likely conclusion but with the destruction of the whole crew.

If there really has been any contagious distemper in the ship, the sound men should be washed and shaved; and, having sunk their old cloaths in the sea, and been provided with fresh ones, should stay in the lazaretto thirty or forty days: for persons may themselves be recovered from a disease, and yet retain matter of infection about them a considerable time; as we frequently find the small-pox taken from those who have several days before passed through the distemper.

The sick should be kept in houses remote from the sound, and shortly after they recover, should also be washed and shaved, and have fresh cloaths; whatever they wore while sick being sunk or buried: and then, being removed to the houses of the sound, they should continue there thirty or forty days.

It is particularly necessary to destroy the cloaths of the sick, because they harbour the very quintessence of contagion. A very ingenious author, in his admirable description of the plague at Florence, in the year 1348, relates, that he saw two hogs, who having found in the streets the rags which had been thrown out from some poor person who had died of the disease, after tumbling them about, and tearing them with their teeth for some time, fell into convulsions, and died in less than an hour. And a learned writer acquaints us, that no less than twenty-five persons were successively killed by the infection of one furr garment, during a plague at Verona, which happened in his time. And a like instance is related, in a work of good authority, of seven children who became infected, and died, by playing upon cloaths brought to

Alckmaer

Alckmaer in North Holland, from an infected house in Zealand.

If there has not been any sickness in the ship, there seems to be no reason why the men should perform quarantine; instead of which, they need only be washed, and their cloaths aired in the lazaretto, as goods, for a week.

But the greatest danger is from goods likely to retain infection; such as cotton, hemp, flax, paper, books, silks, linen, wool, feathers, hair, and all kinds of skins. The lazaretto for these should be at a distance from that for the men; and, being unpacked in convenient warehouses, they should be exposed as much as possible to the fresh air, for forty days.

This may perhaps seem too long; but as we know not the precise time necessary to purge the interstices of spongy substances from infectious matter by fresh air, too much caution cannot be used in this particular: and the time proposed having been long established by general custom, ought not in the least to be retrenched, unless there could be some method devised for discovering with certainty when bodies have ceased to emit the noxious fumes. This might possibly be discovered by putting tender animals near them, particularly birds; because it has been observed, in times of the plague, that the infected places have been forsaken by the birds, and those kept in houses have usually died. Now, should it be found, that birds let loose among goods at the beginning of their quarantine, are affected by the contagion therein, it may in some measure be known when such goods are become clean, by repeating the trial till birds can fly among them without receiving any hurt. But the use of this expedient is only to be known from experience. In the mean time, compassion to such poor labourers as must expose their lives to danger in attendance upon this work, would perhaps well justify even a less probable experiment. And though

it cannot be doubted, that there are infections among animals which do not indifferently affect all kinds of them, some being confined to a particular species; (like the disease of the black cattle a few years since, which neither proved infectious to other brutes, nor to men;) yet it has always been observed, that the true plague among men has been destructive to all living creatures.

A very remarkable story, communicated by a person of undoubted credit, and applicable to the present purpose, well deserves to be noticed. In the year 1726, an English ship took in goods at Grand Cairo, while the plague raged in that city, and carried them to Alexandria: and, upon opening one of the bales of wool in a field, two Turks employed in the business almost instantaneously expired; and several small birds which happened to fly over the place, dropped down dead immediately.

The use of quarantine is, however, not wholly frustrated by our ignorance of the exact time required for this purification: since it at least serves to ascertain whether the goods are infected or not; it being scarce possible that every one of those who are obliged to attend them should escape hurt, if they are so; and the moment any such infection happens, the goods are to be immediately destroyed.

The goods should certainly be opened when they are put into the lazaretto, their being there will otherwise avail little or nothing. This is the constant practice in the ports of Italy; and at Venice, in particular, all bales of cotton, of camels or of beavers hair, and the like, are ripped open from one end to the other, and holes made in them by the porters every day, into which they thrust their naked arms, that the air may have free access to every part of the goods. That some such cautions as these ought not to be omitted, is clearly proved by the misfortune which happened in the island of Bermudas, about the year

1695; where a sack of cotton being put on shore by stealth, lay above a month without any prejudice to the people of the house where it was hid; but, on it's being distributed among the inhabitants, it carried such a contagion with it, that the living were scarce sufficient to bury the dead.

Since it has been frequently experienced, that of all the goods which harbour infection, cotton in particular is the most dangerous, and Turkey is almost a perpetual seminary of the plague, it is highly reasonable, that whatever cotton is imported from that part of the world, should at all times be kept in quarantine; because it may have imbibed infection at the time of it's packing up, though no mischief has been felt from it by the ship's company. And the length of time from it's being packed up to it's arrival here, is no certain security that it is freed from infection. At least, it has been fatally experienced, that the time employed by ships in passing between Turkey and Marseilles, is not long enough for goods to lose their infection; as appears not only from the late instance, but also from an observation made in a memorial drawn up by the deputy of trade at that place: and Marseilles is the only port in France allowed to receive goods from the Levant, on account of the several small islands adjacent, which render it peculiarly convenient for quarantine. It being certain, that goods have retained infection during their passage from Turkey to Marseilles, it will hardly be presumed, in an affair of so much importance, that they are likely to lose all contagion in coming to this country, because the voyage is somewhat longer: especially when it is considered, that there are some few instances of goods retaining their infection for a great number of years. An ingenious foreign writer gives a very distinct relation of a feather-bed, that was laid by seven years on suspicion of it's being infected, which produced shocking effects at the end of

that great length of time: and a learned gentleman of our own country relates, that some cloaths fouled with blood and matter from plague sores being lodged between matting and the wall of a house in Paris, gave the plague several years after to a workman who took them out, which presently spread through that city.

The reason why cotton is so peculiarly dangerous, is on account of it's great aptitude to imbibe and retain any sort of effluvia which approaches it: and a celebrated physician once made a particular experiment, by causing cotton to be placed for a single day near a piece of putrifying flesh from an amputated limb, in a bell-glass, but without touching it; when the cotton imbibed so strong a taint, that being put up in a close box, it retained it's offensive scent near twelve months, and would, he believes, have preserved it for some years. Nor is it to be doubted, if instead of the fumes of putrefied flesh from a sound body, this cotton had been thus impregnated with the fumes of corrupted matter from a person sick of the plague, but it would have communicated that infection. And the experiment would certainly have succeeded alike, in both cases, if silk, wool, or hair, had been inclosed in the vessel, instead of cotton; animal substances being extremely liable to attract the volatile particles which come from bodies of the same nature with themselves.

Though all reasonable provisions should be made both for the sound and sick who perform quarantine, yet the strict keeping of it ought to be enforced by the severest penalties. And where a ship comes from any place in which the plague raged with uncommon violence at the time of it's departure, the only secure method will be to sink all the goods, and in some cases even the ship; especially if any of the crew have died of the disease during their voyage.

Nor should this farther caution be omitted; not to open too soon a free trade with any

any recently infected place, because the contagion has ceased at the approach of winter; for there are many instances of the distemper's being stopped by the winter cold, and yet the seeds of it not destroyed, but only kept inactive, till the warmth of the succeeding spring has given them new life and vigour. Thus, in the great plague at Genoa, about a hundred and twenty years since, which continued part of two years, the first summer about 10,000 died; in the winter hardly any; but during the next summer, no less than 60,000: and even the last plague at London, which appeared towards the latter end of the year 1664, was stopped during the winter by a hard frost of near three months continuance, so that there remained no farther appearance of it till the spring following. Now, if goods brought from any such place should retain the least particles of the latent contagion, there will be much danger of their producing the same mischief in the place to which they are brought, as they would have occasioned in that from whence they came.

But, above all, it is necessary, to punish with the utmost rigour the clandestine importers of goods; from whose wicked practices more danger of bringing this terrible disease is always to be dreaded, than by any other way whatever.

These are material cautions necessary to be observed for defending ourselves against contagion from other countries: but the particular manner of putting them in execution, by visiting of ships, and the regulations of lazarettos, must be left to the proper officers; who ought, however, to be in general assisted by the advice of some skilful physician.

The next consideration is, what would be necessary to be done, if from any mis-carriage in the public care, by neglect of the proper officers, or otherwise, this horrid calamity should be suffered to befall us.

There is no evil in the world, in which the great rule of making an early and vigo-

rous resistance, more properly takes place than in the present instance; and yet it has unfortunately happened, that the common steps formerly taken have had a direct tendency to prevent this maxim from being put in practice.

As the plague always breaks out in some particular place, the directions of the civil magistrate ought certainly to be calculated on such a plan as to render it equally the interest of infected families to discover their misfortune, as when a house is on fire to call in the assistance of the neighbourhood; whereas, on the contrary, the methods taken by the public, on such occasions, have always rather resembled a severe discipline, and even punishment, than any thing of a compassionate care; a circumstance which must naturally make the infected conceal as long as possible the nature of the disease.

The orders issued out at these times have usually been, (and were particularly so during the last plague in the year 1665) the moment any house was discovered to be infected, to keep it shut up, with a large red cross, and these words, "*Lord have mercy upon us!*" painted on the door; watchmen attending day and night to prevent any person from going in or out, except such physicians, surgeons, apothecaries, nurses, searchers, and others, as were allowed by authority: and this to continue at least a month after all the family were dead or recovered.

It is difficult to conceive a more striking scene of misery, than that with which this method must present us. Families locked up from all their acquaintance, though seized with a distemper which the most of any in the world requires comfort and assistance; abandoned to the treatment of some ignorant and unfeeling nurse; and strangers to every thing but the melancholy progress of death among their dearest ties; with little or no hope of life left to the survivors, and that still blended with the

keenest and most distressing doubt, whether they ought not to prefer immediate dissolution, to the wretched and melancholy state of surviving their best friends and nearest relations!

If, as all physicians agree, fear, despair, and dejection of spirits, dispose the body to receive contagion, and when received give it additional force, it is difficult to say how a disease can be more encouraged than by such treatment.

Cruelty to individuals can only be justified by the general good of the whole community: but, on due consideration, this expedient will be found to increase, not prevent, the progress of infection; for while contagion is nurtured in a house, and continually increased by the daily conquests it makes, the air will necessarily become so tainted, as to spread the infection the moment it obtains a passage. Shutting up houses in this manner, is therefore only keeping so many seminaries of contagion, sooner or later to be universally dispersed: for waiting a month, or any longer time, from the death of the last patient, can have no more avail, than keeping a bale of infected goods unpacked; and the poison will in both cases fly out, whenever the pestiferous goddess opens her detested box.

These measures, which were certainly owing to ignorance of the true nature of contagion, have unquestionably contributed, every time they have been practised in this city, essentially to prolong the continuance of the plague; and have, no doubt, had the same ill effects in other countries.

It is, therefore, by no means surprizing, that grievous complaints were frequently made against so unreasonable a custom; and that the citizens were constantly under the most cruel apprehensions of being thus inhumanly shut up. They accordingly concealed the disease as long as possible, and by that means spread and increased it in a most extraordinary manner; and when at length they were confined, they not unfrequently escap-

ed, either by bribes or violence, and sometimes even by murdering the watchmen at their doors: so that, in the night, people were often seen running about the streets, with hideous shrieks of horror and despair, and frequently quite distracted, either through the violence of the fever, or the terrors of mind into which they were naturally thrown by the daily havock among their kindred.

Under these miserable circumstances, many got away; and, when they had escaped, either went to their friends in the country, built huts or tents for themselves in the open fields, or got on board ships lying in the river: and some were saved by keeping their houses free from all communication with their neighbours.

It is to be observed, that whenever popular clamour prevailed so far as to procure some release for the sick, it was constantly followed with a remarkable abatement of the disease. During the plague in the year 1636, which began with great violence, leave being given by the king's authority for people to quit their houses, it was observed, that not one in twenty of the healthful persons removed fell sick, nor one in ten of the sick died: which single instance alone, had there been no other, should have weighed ever after with the magistracy against too strict confinements. But, besides this, in a preceding plague, which happened in the year 1625, another instance occurs, of a very remarkable decrease upon the discontinuing to shut up houses. It was, indeed, so late in the year, before this was done, that the near approach of winter might doubtless be a chief reason for the diminution of the disease which followed; yet, from the sudden and astonishing decrease, it is at least certain, that the liberty then granted, was by no means an impediment: for this opening of the houses was allowed of in the beginning of September; and, though during the last week in August there died no less than

4218, the burials were the very next week diminished to 3344, and by the fourth week after to 852.

Since, therefore, the management in former times neither answers the purpose of discovering the beginning of the infection, nor of putting a stop to it when discovered; it is certainly necessary to pursue different measures: the following plan has therefore been suggested by a physician of indisputable authority.

In the first place, a Council of Health should be established, consisting of some of the principal officers of state, both ecclesiastical and civil, some of the chief magistrates of the city, two or three physicians, and other skilful persons: this council should be intrusted with such powers, as might enable them to see all their orders executed with impartial justice; and no unnecessary hardships, under any pretence whatever, should be put on any person by the officers they employ.

Instead of ignorant old women, who are generally appointed *searchers* in parishes to inquire what diseases people die of, that office should be committed to intelligent and active men; whose business should be, as soon as they discovered any person to have died after an unusual manner, (particularly with livid spots, buboes, or carbuncles) to give notice to the council of health; who should immediately send skilful physicians to examine the suspected bodies, and to visit the houses in the neighbourhood, especially of the poorer sort, among whom this evil generally begins. And if, on their report, it appears that a pestilential distemper has broke out, they should immediately order the several infected families to be removed; the sick being sent to different places from the sound: but the houses for both should be three or four miles out of town; and the sound people should be stripped of all their cloaths, and washed and shaved before they enter their new lodgings. These removals ought to be made

in the night, when the streets are clear of people; which will prevent any danger of spreading the infection. And, besides, every precaution should be taken to provide such means of conveyance as may prevent the sick from receiving injury.

Though this management is necessary with respect to the poor and meaner sort of people; yet the rich, who have conveniences, may, instead of being carried to lazarettos, be obliged to go to their country-houses; care being taken to keep the sound separated from the infected. And all the inhabitants who are yet well should be permitted, and even encouraged to leave the town, which will be the more healthy in proportion to the numbers who avail themselves of this advantage.

In the mean time, compassion and care should by no means be wanting to the diseased; to whom, when lodged in clean and airy habitations, there would, with due cautions, be no great danger in giving attendance. All expences should be paid by the public; and no charges ought to be considered, which are capable of preserving a whole nation from the greatest of human calamities. Nor does it seem at all unreasonable, that a reward should be given to any person who first makes discovery of the infection in any place; since making known the evil to those who are provided with proper methods against it, is incontestibly the first and principal step towards subduing the enemy.

And though the methods taken in other countries, as well as in our own, have been usually different from those here recommended; yet instances of the extraordinary success attending these measures, whenever they have happened to be put in practice, frequently occur.

The magistrates of the city of Ferrara in Italy, in the year 1630, when all the surrounding country was infected with the plague, observing the ill success which attended the conduct of their neighbours, (who,

(who, through the fear of injuring their commerce, endeavoured all in their power to conceal the disease, by keeping the sick confined to their houses) resolved, should occasion require, to pursue a different method. Accordingly, on the instant they received information that a person in their city was dead of the pestilence, they immediately removed the whole family, consisting of seven persons, into a lazaretto, where they all likewise died: but though the disease was thus malignant, it spread no farther, being suppressed at once by this method. Within the space of a year the same case occurred seven or eight times; and this management every time put a stop to it. The example of this city was afterwards repeatedly followed by some other towns in the same territory, with so much success, that it was thought expedient, for the general good, to publish in the memoirs of the people of Ferrara, this declaration: "that the only remedy against the plague is to make the most early discovery of it possible, and thus to extinguish it in the very beginning."

During the plague at Rome, in the year 1657, when the disease had spread itself among both rich and poor, and raged in the most violent manner, the pope appointed Cardinal Gastaldi to be the commissary general of health, giving him the temporary power of the whole sacred college, with full commission to do whatever he should judge necessary. Accordingly, he gave strict orders, that no sick or suspected persons should stay in their own houses. The sick he removed, on the first notice, to a lazaretto in the island of the Tyber; and all who were in the same houses with them to other hospitals just without the city, in order to be sent to the island if they should fall sick; taking diligent care, at the same time, to send away their goods to be cleansed and purified in an airy place.

These regulations were executed with so much strictness, that persons of the

highest quality were not exempted from this treatment; which, at first, occasioned great complaints against the cardinal for his severity: but he soon after received their general thanks; for, in two months, by these means, he entirely cleared the city of the pestilence, which had almost two years infested it. And it was particularly noticed, that though before, when once the disease had got into a house, it seldom ended without seizing the whole family; yet, under this management, scarce one in twenty of the sound persons removed were at all infected.

The plague at Marseilles was likewise stopped a full fortnight by the same measures; and probably might have been wholly subdued, if it had not received new force from the unseasonable confidence of the inhabitants upon this intermission; which, indeed, appears to have been so great, that they would not believe the plague had been at all among them, and publicly upbraided the physicians and surgeons for terrifying them without cause. No doubt, therefore, they at this time so much neglected the cautions necessary for their security, as to leave no room for surprize, that the disease should again break out, with too great violence to be a second time overcome.

But, besides these examples in foreign countries, we have one instance of the same nature nearer home. When the plague was last in England, on it's first entrance into Poole in Dorsetshire, the magistrates immediately suppressed it, by removing the sick into pest-houses without the town, as is well remembered there to this time. Indeed, a very remarkable occurrence has greatly contributed towards preserving all the circumstances of this transaction in memory. After the removal of the sick, the inhabitants found some difficulty in procuring any person to attend them; upon which they engaged a young woman, then under sentence of death, in that service, on a promise to use their interest for obtaining her pardon; she accordingly attended

tended them with great care and tenderness, and yet escaped the contagion; but neglecting to solicit the corporation for the accomplishment of their engagement with her, she was, on a quarrel between them, three or four months afterwards, barbarously hanged by the mayor.

It is to be observed, that as the advice here given is founded on this principle, that the best method for stopping infection, is to separate the healthy from the diseased; in small towns and villages, where such a measure is practicable, if the sound remove themselves into barracks, or such airy habitations, it may probably be even more useful than to remove the sick: and this method has been found beneficial in France, after all others have failed. But the success still proves the necessity of removing the sick, where the other method cannot be conveniently practised.

When the sick families are gone, all the goods of the houses in which they resided should be buried deep under ground: and this seems preferable to burning them; because, especially in a close place, some infectious particles may possibly be dispersed by the smoke through the neighbourhood; as is related to have happened at Venice, where the plague was augmented by burning a large quantity of infected goods in the city. And a learned physician has communicated the relation of a case, given him by an apothecary, who was at the place when the circumstance happened, not unworthy of notice. At Shipston, a little town on the river Stour, in Worcestershire, a poor vagabond was seen walking in the streets with the small-pox upon him. The people being terrified, took care to have him conveyed to a small house, seated on a hill, at some distance from the town, and provided him with necessaries. In a few days the man died; and they ordered him to be buried deep in the ground, and the house with his cloaths to be burnt. The wind being pretty high, blew the smoke

upon the houses on one side of the town: and in that part, a few days after, eight persons were seized with the small-pox. So dangerous is heat in all kinds of pestilential distempers, and so diffusive of contagion. And the houses may likewise be demolished or pulled down, if they are remote enough from others, and it can conveniently be done; otherwise it may be sufficient to thoroughly cleanse and then plaister them over. All possible care ought still to be taken for the removal of whatever causes are found to breed and promote contagion: for which purpose, the overseers of the poor (who might in this case be assisted by other officers) should visit the habitations of all the meaner inhabitants; and where they find them too closely confined, and living in a dirty crowded manner, should lessen their number, by sending some into better lodgings, and use every precaution, by encouragement and assistance, to render them more cleanly and wholesome.

No good work carries with it its own reward so much as this kind of charity; and therefore, whatever the expence may be, it should never be administered with a sparing or grudging hand: for nothing approaches so near to the first original of the plague, as air pent up, loaded with damps, and corrupted with that kind of filthiness which proceeds from animal bodies.

And of this our common prisons afford a striking instance, where very few escape what is called the gaol fever, which is always attended with a degree of malignity in proportion to the closeness and stench of the place: and it certainly becomes the wisdom of government, as well with regard to the health of the public, as in compassion to the prisoners, to take care that all houses of confinement are kept as airy and clean as is consistent with the purposes for which they are intended.

The black affize at Oxford, held in the castle, in the year 1577, will never be forgot; at which the judges, gentry, and

almost all who were present, to the number of three hundred, were killed by a poisonous steam; which some imagined to have issued from the earth, but which a noble and great philosopher more justly supposed to have been brought by the prisoners, who alone remained free from injury, out of the gaol into court.

While this care is taken of houses, the proper officers should be strictly charged to see that the streets be washed and kept clean from filth, carrion, and all manner of nuisances, which should be carried away in the night: nor should laystalls be suffered to be too near the city. Beggars and idle persons should likewise be taken up; and such miserable objects as are neither fit for the common hospitals, nor work-houses, should be provided for in an hospital of incurables.

Orders of this kind are, indeed, at all times necessary to be observed, especially in populous cities: and, though it must be acknowledged we have of late years greatly improved in the article of cleanliness, particularly in the metropolis, owing to some excellent statutes which parliament have of late years very wisely provided for that purpose, yet it is perhaps still to be lamented, that they are not always sufficiently enforced.

If the early precautions we have mentioned prove successful, no methods of correcting the air, purifying houses, or rules for preserving particular persons from infection, will be necessary; to all which, nevertheless, should the plague increase, so as to render the sick too numerous for removal, (which would certainly be the case did the disease rage for a considerable time) regard may still be had.

With respect to the correction of the air, fire has been almost universally recommended, both by ancient and modern writers; who have advised to make frequent and numerous fires in the towns infected. This precept, however, is almost wholly

founded on a tradition that Hippocrates subdued a plague in Greece by this means. But it is observable that no mention is made of any such circumstance in the works of that great man. The best authority for the truth of this report, is the testimony of Galen, though it is also mentioned by other authors. Galen, recommending theriaca as a preservative against the pestilence, has thought proper to compare it to fire: and, upon this conceit, relates, that Hippocrates cured a plague, which came from Ethiopia into Greece, by purifying the air with fires, into which were thrown odoriferous herbs and flowers, together with ointments of the finest flavour. It is remarkable, that among the epistles ascribed to Hippocrates, which, though not genuine, are yet older than Galen, there is a decree said to be made by the Athenians in honour of this father of physicians, which, mentioning the service he had done his country in a plague, says only, that he sent his scholars into several parts, with proper instructions to cure the disease. From which it should seem, that this story of the fires was hardly or not at all known when these letters were compiled. And Soranus yet more confirms that it was framed long after the death of Hippocrates: for he only says generally, that Hippocrates foretold the coming of the pestilence, and took care of the cities of Greece; without any mention of having used this particular expedient. Plutarch, indeed, speaks of a practice like this, as commonly approved among physicians, which he makes use of to illustrate a certain custom of the Egyptians; who, he says, purify the air by the fumes of resin and myrrh, as physicians correct it's foulness, and attenuate it's thickness, during the times of pestilence, by burning sweetwoods, juniper, cypress, and the like.

This is the sum of what can be learned from antiquity as to this point; whence we may discover, that writers have in this case

case declared a little too hastily for the use of common fires, on the authority and from the example of Hippocrates, even allowing the fact as related by Galen: nor will it from thence appear that Hippocrates himself relied upon them, since he thought it necessary to take in the assistance of aromatic fumes. But, as the fact is not grounded upon sufficient authority, it is needless longer to insist upon it. The passage from Plutarch will better explain what was the sentiment of those physicians who approved the practice. It seems, they expected from thence to dispel the thickness and foulness of the air. And, no doubt, such evil dispositions of the air, as proceed from damps, exhalations, and the like, may in some measure be corrected even by common fires, and it's predisposition to receive infection from these causes sometimes removed. But this method, if it be necessary, should be put in practice before the arrival of the pestilence: for when the distemper is once actually begun, and rages, as it is known to be spread and increased by the heat of the summer, and checked by the cold in winter, whatever increases that heat, will undoubtedly add force to the disease. And Mercurialis takes notice, that smiths, and all those who worked at the fire, suffered most severely during the plague at Venice in his time. Whether the service fires may effect by correcting any other ill qualities of the air, will counterbalance their inconvenience in this respect, experience only can determine; and the fatal consequences of the trials made here in the last plague, are more than sufficient to discourage any farther attempts of the like nature: for, fires being ordered in all the streets for three days together, 4000 persons died in one night following; a number considerably more than half the amount of any single week's deceased, either before or after. And, on making the same experiment, in the last plague at Marseilles, the contagion every day spread more and

more through the city with increased rage and violence.

What has been said respecting fires, is likewise to be understood as to firing of guns; which some have too rashly advised. The proper correction of the air, would be to make it fresh and cool: and accordingly, the Arabians, who are best acquainted with the nature of pestilences, advise people to keep themselves as airy as possible, and to chuse dwellings exposed to the wind, situate high, and refreshed with running waters.

With respect to purifying houses, the first care ought to be to keep them clean; for as nastiness is a great source of infection, so cleanliness is the greatest preservative: which shews us the true reason, why the poor are most liable to contagious diseases. It is remarked of the Persians, that though their country is surrounded every year with the plague, they seldom or never suffer any thing from it themselves: and it is likewise known, that they are the most cleanly people of any in the world; and that many among them make it a great part of their religion, to remove filthiness and nuisances of every kind from all places about their cities and dwellings.

Besides, the Arabians advise the keeping houses cool, as another method of purifying them; and for this purpose strew them with cooling herbs, such as roses, violets, water-lilies, and the like, and wash them with water and vinegar; than all which, especially the last, nothing more proper can be proposed. It is also not improper to fume houses with vinegar, either alone or with nitre, by throwing it on a hot iron or tile; though directly contrary to what modern authors usually advise; who make fumes with hot drugs, such as benzoin, frankincense, storax, and the like, from which there can be no reason to expect any virtue likely to destroy the matter of infection, or to preserve particular places from a disposition to receive it, which are the only things in this case to be attempted. The smoke

of

of sulphur, as it abounds with an acid spirit, which is found by experience to be very penetrating, and to possess great power in repressing fermentations, may perhaps be productive of good effects in this way.

Hot fumes appearing to be in general useless, the steams of poisonous minerals ought to be esteemed dangerous; and the use of all fumigations with mercury or arsenic consequently avoided. Much less advisable is the practice of wearing arsenic on the pit of the stomach as an amulet; since this has been often attended with very ill consequences, and is not grounded on any probable authority, being in all likelihood derived from an error in mistaking the Arabian word *darfini*, which signifies *cinnamon*, for the Latin *de arsenico*.

The next consideration, after the purifying of houses, is by what means particular persons may best defend themselves against contagion; for the certainty of which, it would be necessary to put the humours of the body into such a state as might render them unalterable by the matter of infection: but as this is no more to be hoped for, than a specific preservative from the small-pox; the most that can be done, is to keep the body in such order that it may suffer as little as possible. The first step is, to maintain a good state of health, in which we are always least liable to suffer by external injuries; and not to weaken the body by evacuations. The next, is to guard against all dejection of spirits, and immoderate passions; which are daily observed to expose persons to the more common contagion of the small-pox. These ends will be best answered by living with temperance on a good generous diet, and by avoiding fastings, watchings, and extreme weariness.

Another defence may be derived from the use of any thing proper to keep the blood from inflaming; which, if it does not secure from contracting the infection, will at least make it's effects less violent:

and the best means for this purpose, according to the advice of the Arabian physicians, is the repeated use of acid fruits, such as pomegranates, Seville oranges, lemons, or tart apples; but, above all, of wine vinegar in small quantities, rendered grateful to the stomach by the infusion of some such ingredients as gentian-root, galangal, zedoary, or juniper-berries; which medicines, by correcting the vinegar, and taking off some ill effects it might otherwise have upon the stomach, will be of great use: but these, and all other hot aromatic drugs, though much recommended by some authors, if used alone, are more likely to prove prejudicial, by overheating the blood, than to answer any good purpose.

Issues are likewise recommended by an eminent physician; the properest place for which is the inside of the thigh, a little above the knee. And as the smoaking tobacco is much applauded by some, and may be put in practice without any great inconvenience, it may not be improper to give it a fair trial.

But none of these methods promise any certain protection, and leaving the infected place is the surest preservative; next to which, avoiding as much as possible any near approach to the sick, or to such as are but recently recovered, are the most likely means of escaping infection; for the greater security of which it will be proper to avoid all crowds of people: and, indeed, the magistrates should not only prohibit unnecessary assemblies, but likewise oblige all such persons as recover from the disease, to confine themselves for some time, before they appear abroad.

The advice to keep at a distance from the sick, must also be understood to extend to dead bodies; which should be buried at a considerable distance from any dwelling-houses, put deep in the earth, and covered with the exactest care; but not with quick-lime thrown into the grave, as has been customary in foreign parts; and which,

which, being thrown into a fermentation by the acid humours of the putrified body, may occasion exhalations from the ground of so noxious a quality, as to spread the infection to a very considerable distance. Nor should the carcases of those who die of this disease, be kept long unburied, or exposed to the heat of the sun in the way to interment: they should be carried out in the cool of the night, and as soon as possible after death; in which case there will be no great danger of communicating the contagion in this way.

For those to whose lot the melancholy and dangerous office of attending the sick falls, farther cautions and directions are necessary: among the former, they should be strictly enjoined not to swallow their spittle, whilst they are immediately employed in the service of the diseased, but to emit their saliva carefully and frequently; nor should they ever draw in their breath, without moving from the bed-side, and, if possible, towards the window: it has been already observed, that infection received by the mouth or nostrils, generally produces the disorder in it's most malignant state. To these precautions should be added, directions to wash the mouth frequently with warm vinegar, and to apply a sponge wetted with the same liquid to the mouth and nostrils, as often as it shall become necessary to approach the bed, or to move the sick person in it.

These seem to be the best rules which can be offered to individuals, for stopping the progress of this disease; and they have been approved by writers of the first abilities and experience: but other public methods must be adopted to check it's course through countries, and prevent the desolation of cities and towns.

For this end, many measures have been proposed, and in some instances executed even to a degree of cruelty: when the plague prevailed in France, in the last and preceding centuries. lines were drawn round

the infected towns, and guards placed at every possible avenue, to prevent the escape of any of the yet uninfected inhabitants; but this severity seemed to condemn to inevitable death, the unfortunate victims against whom it was directed; and to convert to human punishment the dispensations of Divine Providence.

It has also been proposed, and with an equal appearance of judgment and humanity, to surround the infected place with double lines, one near the town, and the other at a considerable distance; to suffer such of the inhabitants as still remain in health, to pass the first without restraint, but not to return; and to provide them with tents in the space between the two lines, where they might perform a reasonable quarantine, and pass through such purifications as might be thought necessary: nor should they be permitted to go at large without a proper certificate of their having conformed in all respects to the regulations prescribed; and without their being divested of every article of cloathing which has been worn during this purgation.

And this will undoubtedly prove a more effectual method of avoiding the communication of infection to neighbouring towns and villages, than any endeavours to prevent the healthy from escaping. Human vigilance is hardly equal to such a restraint; and where the price of the escape is held at no less value than life itself, no means will be left untried to effect it; many, no doubt, will fail, but some will succeed in the attempt, which has frequently been known to happen, in spite of the utmost care; and one who escapes in this clandestine way, will be more likely to carry with him the infection, and spread it to uninfected places, than a hundred, or even a thousand, who are permitted to depart, after having strictly conformed to the regulations which we have pointed out.

To this may be added, that by confining the whole inhabitants of a place to a narrow

narrow compass, preventing the healthy from escaping, and compelling them to submit to all the horrors of their impending fate; the numbers of the diseased will be necessarily increased, the distemper will rage with augmented fury, and the air itself will become so contaminated, as to convey the contagion to remote distances, and elude the purposes intended by these acts of extraordinary and cruel caution. And this actually happened in the early part of the last century, at Digne in France, where the line being drawn, and the inhabitants closely confined, not above six or seven persons escaped the infection out of ten thousand, and not above fifteen hundred survived of the last-mentioned number; yet, the same town being again afflicted with a pestilence a very few years after, and a different conduct being observed, the uninfected being permitted to depart under proper cautions, the progress of the disease was soon stopped, and not above one hundred lives were lost: and though in the former case the disorder made it's appearance in many neighbouring towns, yet in the latter no such effect followed.

But though this indulgence, with respect to the persons of the inhabitants, is dictated both by policy and humanity, yet it ought to extend no farther; no cloaths, no goods, no merchandize, should be suffered to pass the lines; the seeds of the contagion will lurk in almost every article of commerce; and by permitting any removal of effects, the disease may not only be communicated to the vicinity, but may be carried to the most remote distances; and it becomes the cause of humanity to prevent infection from being conveyed to places where the air being by any accidental means in a corrupted state, the fatal fire may catch, and the unhappy inhabitants, ignorant of their situation, may become sacrifices to the imprudence or avarice of those who ought to guard against such fatal and irresistible evils. The consequences of such neglect have been frequently and severely felt, and in two very

particular instances, when the plague last reigned in these kingdoms: the first, when the plague was conveyed to Poole, in Dorsetshire, (where it afterwards made horrid devastation) in the pack of a pedlar, who had travelled from London; and the second, that a box of goods being sent from that metropolis to a taylor at Eham, in Derbyshire, and the servant who opened it finding the contents damp, and approaching the fire to dry them, was immediately seized with the plague, and died; and the disorder having attacked and destroyed the master and all his family, except his wife, proved fatal to no less than two or three hundred persons in a small village and parish, and was at last stopped, and the communication of it prevented, by some such means as we have above recommended.

In speaking of the cure of this disease, it will be necessary to recur to a remark made in the former part of this chapter: that the plague and small-pox bear a great similitude to each other; that they are both contagious fevers; that they have both been imported from Africa into Europe; that the appearance of both is marked by certain eruptions; and that, as the small-pox has been divided into two species, the distinct, and the confluent, from the different appearances of the pustules or eruptions, so the plague is also attended by two sorts of eruptions or tumors.

In the mild or distinct small-pox, the pustules become prominent, rise high above the surface of the skin, and are filled with a well-digested matter; but in the confluent sort, the pustules are flat, and contain only a thin, acrid, and watery humour; and the two kinds of critical humours which mark the plague, are also distinguished by appearances still more different; in the most favourable case, the diseased matter is expelled towards the surface of the body, and falls upon the glandular parts which are most superficial, such as the groin, the arm-pit, or behind the ear; and the first appearance

appéarante is a small hardness, heat, redness, and an acute piercing pain near these glands; if the disease ends happily, and the patient recovers, these tumors discharge the disease by a proper suppuration, like the eruption of the distinct small-pox; in the worst and most dangerous case, carbuncles appear instead of tumors, and in other parts of the body rather than among the glands; these carbuncles first appear in a very small hardness in the skin, which becomes in the particular places affected of a dusky red colour, and the patient suffers by intense heat and great pain in the part; a blackish spot soon shews itself in the center of the carbuncle, which is the commencement of the gangrene, and increases in size, and spreads, till the mortification becomes universal.

But besides these particular black spots in the several carbuncles, others also appear on different parts of the body, and are the certain signs of approaching death, and in this symptom also, the similarity of the plague and small-pox is very distinguishable, the same appearances being very common in the last-mentioned disorder, and producing generally the same fatal effects; in both distempers, too, when they are peculiarly malignant, discharges of blood by the mouth, in the urine, and the like, are by no means unusual; and it has been universally admitted, that internal mortifications are the immediate causes of death in both diseases.

The analogy between the disorders being thus evident, it may naturally be inferred, that the means of cure must be nearly the same; antidotes and specific medicines are no more to be relied on in the one disorder than in the other, but the same rational mode of treatment must be pursued in both.

In the management of the small-pox, we have already shewn that the great objects are, to clear the first passages, to regulate the fever, and to promote in some de-

gree the natural discharges; in the plague the same path is pointed out, with this difference, that as the fever is more acute, the stomach and bowels are sometimes inflamed, and require the administration of medicines, which are usually wholly unnecessary in the small-pox; the eruptions also demand external applications, which is not the case with the pustules of the last named disease; and it is of great importance that the state of the intestines should be attended to, because if they are discovered to be inflamed, emetics should be given sparingly, and those of the very mildest kind; it is indeed advisable to omit vomiting wholly, if upon the first seizure of the patient there are any indications of an inflammation having already taken place.

When the fever is extremely acute, as is generally the case, the cool regimen which has been adopted with so much success in the small-pox, will be still more necessary in this disease; but should the heat decline too rapidly, and the pulse become languid, it may be proper to admit such moderate cordials as have been already allowed in cases of the small-pox where the like changes take place.

But whether the eruptions consist of glandular tumors or carbuncles, they must not be left to the course of nature; every effort must be used to bring them to suppuration, and the means employed for this purpose must be the same in both cases; the application of a cupping-glass, without scarifying, hath been recommended on the first appearance of either; and as there is always great emergency and extreme danger, till the tumors are filled with matter, this method may probably hasten the formation of it: as soon as the glass is removed, a digestive cataplasm may be applied, or a plaister of the warm gums.

But if a suppuration cannot be procured, which is generally the case of the carbuncle, if a thin watery humour oozes through the

the pores, if the tumor feels soft to the touch, or if it is covered with a black crust, it ought to be immediately opened by incision; and if any part of it is mortified, as frequently happens in the carbuncle, it must be scarified without delay, and the bleeding should be stopped by the actual cautery, after which the wound may be dressed with dossils or pledgets of lint, first spread with a digestive made with turpentine and yolk of egg, and then dipped in a mixture of two parts of warmed oil of turpentine, and one part of spirit of sal-ammoniac, or in balsam of turpentine; and the whole must be covered with an anodyne cataplasim.

On the following day the wounds may be well bathed, with fomentations made of warm aromatic herbs, with the addition of spirit of wine; and if this succeeds to make the wounds digest, and to separate the sloughs, they may afterwards be healed as ulcers occasioned by ordinary abscesses.

When the glandular tumors are brought to suppurate, it will be dangerous to wait till the matter makes it's way to the outer skin, they should rather be opened as soon as they arrive at any moderate size; because as these tumors are frequently seated deep in the gland, they are apt to mortify before the suppuration reaches the surface.

But though this is the only method in which the plague can be treated, following the natural course of the distemper, yet notwithstanding the utmost care, the patient runs so great a hazard from the rapid progress of the disease, which threatens death whilst the cure is attempting; that physicians have endeavoured to discover some artificial discharges for the corrupted humours; and one of our own country, justly celebrated for learning, judgment, and experience, is said to have tried with success, copious bleedings and profuse sweatings, both which evacuations, however, he thinks, are only admissible in the very beginning of the disease, and before any ag-

gravated symptoms have taken place; and that no hope can be entertained of their proving beneficial, unless they are more copious than can be justified in any other disease of less immediate danger and emergency.

The quantity of blood necessary to be taken away, can only be determined by the particular circumstances of each distinct case, the best general direction that can be given, is to draw it with a liberal hand; for in a case desperate as this, it is certainly more prudent to run some hazard of exceeding, than to let the patient perish for want of a necessary degree of boldness.

The sweats should rather be promoted by some aromatic decoction, such as snake-root or the like, than by such solid medicines as are usually given to excite perspiration; these decoctions may be rendered palatable by the addition of the juices of lemons and oranges, or other acids, which will also contribute to check the tendency to putrefaction.

But if, on a subject of such importance, and of so delicate a nature, we may venture to offer an opinion of our own, which however we do with diffidence, and merely as a hint to those whose situations enable them, and whose benevolence prompts them to push the means of prevention to the utmost extent; we cannot help earnestly wishing, that in those countries where the plague prevails frequently, and where it's unwelcome visits are annually expected, the practice of inoculation might be tried. The opinions of the ablest writers have determined the analogy between the plague and the small-pox. The fury of the latter, long the pestilence of the western world, has given way to this salutary preservative, and it has almost ceased to be the dread and horror of mankind; perhaps the same happy expedient might prove equally successful in blunting the arrow of the pestilence, and disarming the most fatal of all diseases of the terrors which have too long attended this scourge of the human race.

Perhaps

Nor can this experiment be attended with any considerable degree of danger, after the disease has been fully ascertained to be that species of the plague or pestilence, which, like the small-pox, never visits the patient more than once in his life; of the inhabitants of an infected town, though many may escape the contagion, few can entertain hopes of this exemption; and when to this great probability of being immediately attacked by it, we add the danger of future visitations, which, in those countries that are most subject to the ravages of this disease, are expected at certain stated periods, it is no very unwarrantable conjecture to conceive, that a method may be found to convey the infection, by way of inoculation, in such a manner, and under such regulations, regimen, and medical management, as to produce the disease in a very slight degree, robbed of the terrors which at present attend it's approach, and to render it little more formidable than other epidemic diseases.

Nor would the benefit of such a discovery be confined to the immediate salvation of individual lives; by modifying the matter in such a way, it's malignity may in a course of time abate, and the natural attacks of the disease prove less fatal: and should this expedient be found generally successful, the inhabitants of an infected town would fly to it as an immediate refuge, and from time to time still less subjects would

be left for it's periodical visits, till it's whole force was expended, and it ceased to be even epidemic.

Perhaps some apology may be necessary for having dwelt so long on a disease which has for such a length of time withdrawn it's baneful influence from the Island of Great Britain; but our work is intended for the voyager and traveller, as well as the resident of these kingdoms; to these it may be immediately important to be well informed of the nature, symptoms, prevention, and cure of a disorder, which is rendered more dangerous, by the general ignorance which prevails concerning it, and more particularly in the very countries which are most frequently visited by it: nor ought we to rest assured, that because Providence has protected this happy island from it's ravages for more than a century, it will therefore never revisit it; to avoid such an enemy, every precaution that can be offered is of value; and to be prepared with means to meet and conquer it, is an object well worthy our most serious attention.

We shall conclude this chapter with a Table of the devastation committed in the city of London, by the pestilence in the memorable year 1665, which may answer the double purpose of gratifying the curiosity of our readers, and convincing them of the vast importance of the subject which we have just discussed.

FUNERALS in the several Parishes within the Bills of Mortality of the City of LONDON, in the Year 1665; distinguishing the Deaths occasioned by the PLAGUE.

Funerals	Pla.	Funerals	Pla.	Funerals	Pla.
St. Alban's, Wood Street	200 121	St. Foster's	144 105	St. Martin's, Ludgate	196 128
St. Alhallows Barkin	514 330	St. Gabriel's, Fenchurch	69 39	St. Martin's Orgars	110 71
St. Alhallows, Bread Street	35 16	St. George's, Botolph Lane	41 27	St. Martin's Outwich	60 34
St. Alhallows the Great	455 426	St. Gregory's by Paul's	376 232	St. Martin's Vintry	417 349
St. Alhallows, Honey Lane	10 5	St. Helen's	108 75	St. Matthew's, Friday Street	24 6
St. Alhallows the Lefs	239 175	St. James's, Duke's Place	262 190	St. Maudlin's, Milk Street	44 22
St. Alhallows, Lombard Street	90 62	St. James's, Garlickhithe	189 118	St. Maudlin's, O. Fifth Street	176 121
St. Alhallows Staining	185 112	St. John Baptist's, Walbrook	138 83	St. Michael's, Baffishaw	253 164
St. Alhallows the Wall	500 356	St. John the Evangelist's	9 —	St. Michael's, Cornhill	104 52
St. Alphage	271 115	St. John's Zachary	85 54	St. Michael's, Crooked Lane	179 133
St. Andrew's Hubbard	71 25	St. Lawrence, Jewry	94 48	St. Michael's, Queenhithe	203 122
St. Andrew's Underhaft	274 189	St. Lawrence, Pountney	214 140	St. Michael's, Quern	44 18
St. Andrew's Wardrobe	476 308	St. Leonard's, Eastcheap	42 27	St. Michael's Royal	152 116
St. Anne's, Aldersgate	282 197	St. Leonard's, Foster Lane	335 255	St. Michael's, Wood Street	122 62
St. Anne's, Black Friars	652 467	St. Magnus	103 30	St. Mildred's, Bread Street	59 26
St. Antholin's	58 35	St. Margaret's, Lothbury	100 66	St. Mildred's, Poultry	68 46
St. Autfin's	43 20	St. Margaret Mofes	38 25	St. Nicholas Acon's	46 28
St. Bartholomew's, Exchange	73 51	St. Margaret's, N. Fifth Street	114 66	St. Nicholas Coleabby.	125 91
St. Bennet's, Finch	47 22	St. Margaret Patton's	49 24	St. Nicholas Olave's	90 62
St. Bennet's, Gracechurch	57 41	St. Mary's, Abchurch	99 54	St. Olave's, Hart Street	237 160
St. Bennet's, Paul's Wharf	355 172	St. Mary's, Aldermanbury	181 109	St. Olave's, Jewry	54 32
St. Bennet's Sherehog	11 1	St. Mary's, Aldermary	105 75	St. Olave's, Silver Street	250 132
St. Botolph's, Billingsgate	83 50	St. Mary-le-Bow's	64 36	St. Pancras, Soper Lane	30 15
Christ Church	653 467	St. Mary Bothaw's	55 30	St. Peter's, Cheap	61 35
St. Catherine's, Coleman Str.	299 213	St. Mary's Colechurch	17 6	St. Peter's, Cornhill	136 76
St. Catherine's Cree	335 201	St. Mary's Hill	94 64	St. Peter's, Paul's Wharf	114 86
St. Christopher's	60 47	St. Mary's Mounthaw	56 37	St. Peter's Poor	79 47
St. Clement's, Eastcheap	38 20	St. Mary's Somerfet	342 262	St. Stephen's, Coleman Street	560 391
St. Diony's, Back Church	78 27	St. Mary's Staining	47 27	St. Stephen's, Walbrook	34 17
St. Dunstan's in the East	265 150	St. Mary Woolchurch	65 33	St. Swithin's	93 56
St. Edmund's, Lombard Street	70 36	St. Mary Woolnoth	75 38	St. Thomas Apostle's	163 110
St. Ethelborough's	195 106	St. Martin's, Ironmonger Lane	21 11	Trinity Parish	115 79
St. Faith's	104 70				

Within the Walls, 97 Parishes, Total 15,207; of the Plague 9887.

Funerals	Pla.	Funerals	Pla.	Funerals	Pla.
St. Andrew's, Holborn	3958 3103	St. Botolph's, Aldgate	4926 4051	St. Saviour's, Southwark	4235 3446
St. Bartholomew's the Great	493 344	St. Botolph's, Bishopsgate	3464 2500	St. Sepulchre's	4509 2746
St. Bartholomew's the Lefs	193 139	St. Dunstan's in the West	958 665	St. Thomas's, Southwark	475 371
St. Bridget's	2111 1427	St. George's, Southwark	1613 1260	Trinity, Minorities	168 123
Bridewel Precinct	230 179	St. Giles's, Cripplegate	8069 4838	At the Pest House	159 156
St. Botolph's, Aldersgate	997 755	St. Olave's, Southwark	4793 2785		

Without the Walls, 16 Parishes, Total 41,351; of the Plague 28,888.

Funerals	Pla.	Funerals	Pla.	Funerals	Pla.
St. Catherine's, Tower	956 601	Lambeth Parish	798 537	St. Mary's, Islington	696 563
St. Giles's in the Fields	4457 3216	St. Leonard's, Shoreditch	2669 1949	St. Mary's, Whitechappel	4766 3855
Hackney Parish	232 132	St. Magdalen's, Bermondsey	1943 1363	Rotherhithe Parish	304 210
St. James's, Clerkenwell	1863 1377	St. Mary's, Newington	1272 1004	Stepney Parish	8598 6583

Extreme Parts of London and Westminster, 12 Parishes, Total 28,554; of the Plague 21,427.

Funerals	Pla.	Funerals	Pla.	Funerals	Pla.
St. Clement's Danes	1969 1319	St. Martin's in the Fields	4804 2883	St. Margaret's, Westminster	4710 3742
St. Paul's, Covent Garden	408 261	St. Mary's, Savoy	303 198	At the Pest House	156

In the City and Liberties of Westminster, then consisting of 5 Parishes only, Total 12,279; of the Plague 8403.

Funerals in the whole - - - 97,306

Deaths by the Plague - - - 68,261 by the Parish Clerks.

Besides Numbers who were privately buried, and no Account

B O O K VIII.

Of the celebrated Spas, and Mineral and other Medicinal Waters in Great Britain, and other Parts of the World; of the Efficacy of Sea-bathing and Sea Water; and of medicated Baths and Fumigations.

C H A P. I.

Of Medicinal Waters in general.

IN the consideration of the several matters proposed to be the subjects of this Book, a fresh opportunity presents itself, of admiring the consummate wisdom and infinite mercy of the Great Creator, in the wonderful dispensations of his providence, as it is extended to the race of man in this sublunary world. In every quarter of the globe, to which human discovery has reached, natural medicines are to be found adapted to the particular disorders to which the inhabitants of each clime are peculiarly liable; and the disease no sooner makes it's appearance, than relief is at hand to remove it. Amidst the humid air, the pestilential vapours, the metallic effluvia of Peru, the *bark* of a plant which spontaneously covers the mountains, proves an infallible remedy for the slow fever, the putrid fever, and the ague. Where the venomous bite of the tremendous rattle-snake threatens death in all it's terrors, the *plantain* and *korebound*, in wild profusion, offer a speedy and effectual cure: in the frozen mountains of the northern world, the very *snow* is a sovereign remedy for the frost-bitten traveller; and in the torrid desarts of Arabia, the air is impregnated with *spicy particles*, resisting the powers of putrefaction.

But among the natural productions which appear calculated to lessen the pains, and

alleviate the sufferings which are incident to frail mortality, none seem to be of greater efficacy, or to be dispensed in a more liberal proportion, than salubrious *springs* and *medicinal waters*, which are known to abound in all the countries of the discovered world, and to vary so exceedingly in quality and operation, that they are applicable to almost every malady of slow progress to which the human body is liable.

On the virtues and efficacy of some of these waters, where they have been accidentally raised into reputation, elaborate treatises have been written; and critical directions have been offered by physicians, who have acquired fame and fortune in attending these fountains of health, for regulations of regimen and medicine, during the use of these salutary draughts; whilst others, less celebrated, though probably equally efficacious, being from situation or other circumstances less frequented by the great and affluent, and being consequently of less importance to the faculty, are either left wholly unnoticed, or are mentioned with so slight a pen, as to convey no very high idea of the benefit which may be expected from them.

But, lest this remark should be thought to contain an insinuation of partiality, or self-interestedness, in a profession highly and justly esteemed for candour and liberality;

it

it becomes necessary to observe, that as experience is the only just ground on which approbation or disapprobation can be pronounced, so the most determinate conclusions must of course be drawn from the effects of those waters, which have been most frequently tried, under the immediate observation of the learned and skilful; and that it may be the misfortune of mankind, but cannot reflect the least blame on the physician,

if the water of each individual spring does not receive it's due proportion of praise.

In the following chapters we propose to notice distinctly, and alphabetically, as to each country, the different medicinal springs in England and Wales, Scotland, Ireland, and the various other parts of the world, where their virtues have been celebrated by physicians, travellers, or naturalists.

C H A P. II.

Of the Medicinal Springs and Waters of England and Wales.

THE first medicinal water which occurs in our Alphabetical arrangement is,

ACTON, in Middlesex, about Six Miles from London.

The water of Acton-wells contains a purging salt, and a proportion of sea salt; it is perfectly transparent, and free from smell, but is of a bitterish taste resembling a solution of Epsom salts. It's purgative quality is rather violent, occasioning an excoriation of the gut at the extremity.

The season for taking these waters, is in the months of May, June, and July.

AWFORD or **ALFORD**, in the South Part of the County of Somerset.

This is a salt spring, and is said to have been discovered in the year 1670, by the resort of pigeons, who are known to be attracted by salt.

This water also contains a purging salt, and a mixture of sea salt, and is of a very strongly purgative quality.

It is said to be of a cooling, cleansing, and attenuating nature; and to be serviceable in obstructions of the glands, scurvy, jaundice, and the like; and it's diuretic and

perspirative qualities recommend it as a remedy in the stone, gravel, and other disorders which affect the bladder and kidneys, and for the relief of obstructed perspiration.

ALKERTON, near the City of Gloucester,

Is a purging water, possessing nearly the same qualities as those of Epsom, hereafter mentioned.

ASKERON, in Yorkshire, a few Miles from Doncaster.

This water is strongly impregnated with sulphur, with a slight tincture of purging salt.

It has been found useful in the king's evil, in leprous and scabby complaints, and in ulcers of various kinds; it's operations are both purgative and diuretic, and it has been advised in cases where the bowels have been obstructed from supposed foulness, and when worms have been suspected.

ASTROP, near the Town of Banbury, in the County of Oxford.

This is a chalybeate water, of a lively, vinous, and not unpleasant taste; is directed to be taken in quantities to the amount

amount of six or seven pints in the forenoon, for female obstructions, hypochondriac complaints, and gravel or other urinary disorders, operating as a very gentle purgative.

ASWARBY, near Grantham, Lincolnshire.

This water is also chalybeate, and of a transparent blue cast; it creates an appetite, is of great virtue in scorbutic and scrophulous complaints, and is also said to be a remedy in the gravel; it operates as a mild laxative, neither occasioning gripes or dejection of spirits, and is free from any mixture of sea salt.

AYLSHAM, in Norfolk.

This is also a light chalybeate water, and is recommended to restore digestion, create an appetite, remove hypochondriac complaints, and generally to invigorate the animal system.

BAGNIGGE Wells, near London.

The waters of these wells are of different kinds, the one purgative and the other chalybeate.

The former, when it is fresh from the pump, is remarkably limpid and clear, discharging more air-bubbles at the surface than most other waters at the spring head, though not in the like quantity as the chalybeate water which rises on the same spot; it neither grows foul, drops a sediment, or throws up a scum, when kept in a clean vessel, unless heated beyond the natural warmth of any known climate.

It's taste in the mouth is not disagreeable, but it leaves a brackish bitterness on the palate.

Three half pint glasses of this water are sufficient for a purge in most constitutions, without any addition of artificial salts, and it operates without producing gripings, faintness, or excoriation of the rectum; on the contrary, it is said to relieve the last mentioned complaint, when it hath been brought on by violent cathartics.

It is said to be efficacious in cleansing the first passages, and in removing habitual costiveness, cholics, and the twisting of the guts, taken warm at going to bed; and it is also recommended as a purge for persons of hypochondriac and scorbutic habits, it's operation being mild, expeditious, and certain, without fermenting the humours, or agitating the blood. In smaller doses it acts as an alterative, and has been administered with success in scorbutic and scrophulous disorders of long standing.

It is also recommended to correct acridities and corrupt humours in the intestines, to prevent sour belchings, and hard swellings of the stomach, to relieve the heartburn, restore the decayed appetite and digestion, to stop retching and vomiting, and to relieve anxieties, palpitations, tremors, pains, swimings, and giddiness of the head.

It is prescribed as a remedy for pimples, heats, and other eruptions in the face, and as a cure for worms, by scowering away the slimy viscid humours which lodge and nourish these troublesome guests in the intestines.

This water is directed to be taken in the quantity of two, three, or four glasses in a morning according to constitution, and to the effect produced; after this course has been pursued three or four days, it should be discontinued two days, and then resumed; and in this manner it may be followed as long as it is found beneficial and necessary: when it is used as an alterative, a glass or two will be sufficient in a day, and in either case a liquid diluting breakfast of tea, water-gruel, or whey will be proper.

If the cold water disagrees with the stomach, it may be warmed without lessening it's purgative qualities; or those who have weak stomachs may chew and swallow cardomoms, carraways, or other warm seeds. It is always adviseable to use gentle exercise during a course of this water.

The chalybeate well is about forty yards from the purging well, and the water when

first pumped up is exceedingly clear, and nearly of the complexion of the purest rain water; as it issues from the pump the smell of it is somewhat sulphureous, and great numbers of air bubbles are discharged at the surface; the taste is highly mineral, with a brisk and agreeable subacid tartness.

Being suffered to stand exposed to the air, it will assume a whey-like appearance in an hour or less, and lose it's clearness; but this change takes place sooner or later according to the warmth of the weather. After a day or two a sediment resembling ochre begins to drop, and if the vessel is an open one, and remains undisturbed, a shining scaly dust covers the surface of the water which sinks to the bottom if the vessel is moved, and rises no more.

The mineral virtue of this water is retained to an amazing degree in all seasons and climates; and if it is put into clean bottles, well corked and waxed, may be carried to the most distant part of the globe, without suffering any diminution of it's qualities.

To persons who are not used to this water, it communicates a kind of giddiness and raises an extraordinary flow of spirits, but this is apt to terminate in a propensity to sleep, which requires to be carried off by exercise. Upon the first taking of this water, it frequently acts as a purgative; but this effect only continues whilst it is cleaning away those vitiated contents of the first passages, which produce sour belchings, distention, and hardnesses of the stomach.

It is said to correct acidities and acrimonious and bilious humours, to check violent fermentations of the blood, and to exhilarate and raise the spirits beyond most other medicines.

In glandular obstructions and scrophulous disorders in young people it is highly recommended; and it has a reputation for strengthening the appetite and assisting digestion.

It hath also been advised in hypochon-

driac, hysteric, and nervous complaints, being so mild as seldom to disagree with those delicate constitutions which cannot endure any of the preparations of steel.

The catalogue of diseases for which these waters have been prescribed, will hardly come within the compass of our present undertaking; to those we have already named, may be added, beginning consumptions, disorders of the intestines, spleen, and liver; violent evacuations, either of the female discharges, or dysenteries; diabetes, ulcers in the kidneys, gravel, stone, jaundices, wastings of the flesh, relaxations, nervous debilities, irregular gout, and scorbutic rheumatisms.

In the administration of the chalybeate waters of the Bagnigge well, the following rules are directed to be observed:

In full and sanguine constitutions, and particularly in a suppression of the menses, to bleed moderately before the waters are given; and if the stomach and intestines are clogged, an emetic is advised in the evening, three glasses of the purging water on the following morning, and on the succeeding day a single glass of the chalybeate, which may be increased by degrees to three, four, or even five glasses, if it sits well on the stomach, and passes easily off by stool or urine; when this course has been continued a proper time, it should be concluded with a dose or two of the purging water.

Between each glass gentle exercise should be used, but by no means to such a degree as to raise a sweat; and during the whole course, regard should be had to the diet, which should neither be crude or windy.

In costive habits, in scrophulous, scorbutic, and rheumatic complaints, and in the stone and gravel, the purging and chalybeate waters may be mixed, or each drank on alternate days; and if the chalybeate should at first disagree with the stomach, it may be reconciled to it by chewing a few carraway seeds, or dropping into each glass

of the water a small quantity of the tincture of cardamoms.

BANDWELL, or BALL, in Lincolnshire.

The water of this spring is limpid, cold, and sweet tasted, possesses a petrifying quality, and is said to cure loosenesses and bleedings; and applied externally, to restore weakened joints: four or five half pints are prescribed as a dose.

BARNET and North Hall.

The waters of these springs, though several miles distant from each other, the former rising at East Barnet, and the latter near High Barnet, Hertfordshire, possess similar qualities, both being slightly purgative.

BARROWDALE, near Kewick, in the County of Cumberland.

This is a salt spring, the water resembling in taste and effect sea water, though its operations are rather more violent.

A pint of this water generally purges briskly, and even this small quantity is apt to occasion thirst and a disagreeable heat; taken in smaller portions, it acts as an alterative, operating by urine, and for this purpose a large wine-glassfull is a proper dose.

It is recommended to be used internally and externally, in all cases where the sea water is advisable; it is said to have been applied with success in the scurvy, leprosy, and king's-evil, in glandular obstructions, and in disorders of the skin.

BATH.

There are several baths in this city, of which the king's bath, the queen's bath, and the cross bath are the principal, which may be supposed to be supplied from distinct springs, as they differ considerably in the degrees of warmth; but this cannot be positively determined, the waters of all possessing nearly the same qualities.

To nice observers this water has a sul-

phureous smell, which is most perceivable when the baths are filling; its taste is very slightly bitterish and saline, somewhat tinctured with a chalybeate, which, however, is by no means predominant; it appears of a sea-green colour in the baths, but in a glass is perfectly transparent, and without colour, sparkling like the Pyrmont water.

It contains either a quantity of fixed air, or some volatile acid, sufficient to curdle milk, or even to dissolve iron, as it is drawn from the pump.

The chief operations of the Bath water, are by urine and insensible perspiration: on first using it, the patient is apt to complain of a drowsiness and weight in the head, but these effects soon disappear; taken in small quantities, it produces costiveness, but this may be corrected by increasing the dose, when it will rather act as a purgative.

A course of these waters is recommended to be preceded by a regimen as to diet, gentle opening medicines, and in case of full and sanguine habits, bleeding, as they are rather of a heating nature. The seasons are, the months of April, May, and June, August, September, and October; and a course should continue five or six weeks.

They may be taken in quantities from one pint to two quarts in a day, beginning with small doses, and increasing as they sit on the stomach and agree with the constitution; in whatever quantities however they are administered, the dose for the day should be divided into three unequal parts; the largest to be swallowed before breakfast, the next in quantity before dinner, and the smallest before supper, and at least an hour before each meal; immediately after taking the water, the patient should use moderate exercise; and, during the whole course, regard must be had to regimen in diet, hours, and, above all, to keep the mind in as tranquil a state as possible.

Used internally, these waters are said to brace up and stimulate the nerves and fibres, augment

augment their electricity, and invigorate the whole human system; to correct acrimonious putridity, and to strengthen and increase the tone of the bowels and stomach; mingling with the circulation, they are reputed to promote it, and increasing the action of the muscles on the vessels to enter the smallest of these distributors of the animal fluids, and removing all obstructions, to accelerate the passage through the pores of such parts of these fluids as have become corrupt, and are necessary to be expelled from the general mass.

They are highly esteemed as remedies in all those disorders of the bowels and stomach which proceed from relaxation, weakness, or a tendency to putridity in the humours; in hysteric and hypochondriac complaints; in cases of indigestion, windy cholick, and lasting pains in the stomach; in the removal of female obstructions, occasioning a stoppage of the natural discharges in barrenness; the *fluor albus*, or whites; in nervous disorders, and those in particular which affect the head, such as convulsions, epilepsies, and paralytic seizures of all kinds; in obstructions of the liver, spleen and other intestinal parts; in eruptive disorders, leprosy, scurvy, and even that species of the last-mentioned disease which has been acquired at sea; in flying gout, and unsettled rheumatic complaints, in the gravel and stone.

Great relief has been obtained from the Bath waters in those biliary concretions, which are commonly called gall-stones; but in these cases the use of them must be accompanied with the Castile soap, and now and then a gentle cleansing purge of rhubarb, or the like.

It may, however, be necessary to mention certain cases, in which physicians have concurred to forbid the internal use of the Bath waters; these are, inflammatory rheumatisms, inflammations on the lungs, and particularly if they tend to suppuration; in pa-

roxisms of the gout, and generally in all cases, where the too strong action of the fibres threatens inflammation, where the blood is too viscid, and the animal heat already too violent.

Nor are the virtues and effects of these waters confined to the internal use of them. They are applied with equal advantage externally, and that too in paralytic complaints, contrary to the opinion of some eminent writers; they are also peculiarly serviceable in stiffnesses, sprains and relaxations of the joints, and in other disorders of the limbs, occasioned by obstructions; in old sores, scurvy and diseases of the skin, and in restoring strength and pliability to the limbs and joints, after long and weakening fits of the gout and rheumatism.

Where particular parts of the body are affected, pumping on the diseased limb is to be preferred to general bathing; and the scum of these waters hath been successfully employed in making poultices of proper herbs, to be applied to weakened joints, hard swellings, old ulcers and other partial indispositions.

It is in most cases proper to join the internal to the external use of these waters: if the former should occasion a roughness and erysipelatous redness on the skin soon after taking them, no danger need be apprehended, as it will disappear after the course has been some time continued.

BILTON, in Yorkshire, near Knaresborough.

The water of this spring is remarkable for its peculiar coldness; it emits a strong smell of sulphur, and is somewhat salt to the taste; its operation is mildly purgative.

BINLEY, in Warwickshire, near the city of Coventry.

This water, which is chalybeate, acts by purge and urine, but does not possess the former quality in any great degree.

BIR-

BIRMINGHAM, in the same County of Warwick,

Is also a chalybeate water, of rather a more lively quality than that of Binley, but nearly resembling it.

BRENTWOOD, in Essex,

Is a mineral purging water, of nearly the same qualities as that of other springs of the like description.

BRISTOL Hotwells.

This spring rises on the bank of the river Avon, about a mile below Bristol, between high and low water mark, and it's medicinal virtues are said to have been originally discovered by some seamen, who, frequenting this place, found the water serviceable in curing the itch, and healing old ulcers and sores, tho' it was not noticed till the beginning of the last century, nor did it arrive to any great degree of reputation, till towards the end of it, when the magistrates of Bristol thought it worth their care, and endeavoured to secure it from the tide by a high wall round the spring; and various improvements have been since made to add to this security, though they have not proved wholly effectual.

The Bristol water in a glass appears to the naked eye transparent, colourless and manifestly impregnated with air, sparkling and bounding through it's substance in the form of little bubbles, so that the whole seems to be in a ferment; and this air, or elastic matter, appears to be the cause of the intestine motion of the fluid, and of the facility with which the globules roll over each other, and to the same cause we may attribute the property of this water to keep any length of time without putrifying.

This water is without smell, peculiarly soft, pleasant and agreeable to the taste, and to the touch barely lukewarm.

It will bear carriage, nor does it acquire any foulness or ill smell by keeping, though it loses a portion of the elastic air in bottling, and before the bottles can be corked.

The method commonly recommended for taking these waters, is to begin with a single glass before breakfast, and another in the middle of the afternoon between dinner and supper, adding another glass in each interval, at the distance of a quarter of an hour, the second day, and a third on glass the third day; and this, allowing for variation of constitution, and circumstances, may continue to be the course.

For common drink at meals, it should stand uncorked a few hours after it is brought from the well, or the bottle uncorked may be set in a vessel of warm water; it is usually mingled with wine, but is much better unmixed.

Little preparation is necessary to the drinking these waters; yet the following directions may be of use:

The passions should be kept as much as possible within bounds; excesses and violence inflame and irritate the blood, prevent digestion, and destroy the effects of the waters.

To the sanguine, the florid, and those of grosser habits, some preparatory evacuations may be serviceable; the thin, pale, enervated, and phlegmatic patient will be rather injured by any.

Where the guts are clogged with a gross glutinous phlegm, gentle purgatives are necessary; and in such cases, no medicine can be used with better effect than the *magnesia alba*, which may be administered with safety, at all times and seasons, and in any quantities.

Emetics should only be admitted as preparations for the Bristol waters, when there is not the smallest apprehension of disorder in the intestines: should any of the internal parts be affected, the administration of vomits may be attended with great danger.

In inflammatory fixed pains, or in cases of giddiness or foulness, brought on by the use of the waters, bleeding may be proper; but it is seldom or ever necessary as a preparative.

Gentle exercise, particularly on horse-back,

back, tends greatly to facilitate the operation of these waters; and the sea air taken on the downs, in the neighbourhood of the wells, refreshes and strengthens the lungs, and particularly of those who are unaccustomed to breathe it; but exercise should by no means be extended to fatigue, nor should those who wish to have the waters operate by urine, ride on horseback; such patients require but little motion, and what they are obliged to take should be in walking.

In all disorders of the lungs, proceeding from neglected colds, fevers, and inflammations, or from any other cause, and in every stage of these complaints, the Bristol waters are held to be highly efficacious.

In consumptions, they have been used with astonishing success, and more especially in the early stages of these diseases; perhaps, if they were applied to in season, which, however, is unfortunately seldom the case, they might be found to be almost infallible: it is unnecessary to add, that in these disorders a regimen is requisite with regard to diet, and that some gentle medicines may promote the efficacy of the waters.

In internal hæmorrhages of all kinds, whether the blood passes by urine or stool, in the piles, or by an immoderate discharge of the menses, these waters afford certain relief.

They are recommended to check old diarrhæas and dysenteries, the *fluor albus*, or whites, obstinate gleets, the diabetes, and other disorders occasioned by too great an increase of the secretions, or by the thinness of the humours; they are also said to restrain wasting sweats, and to restore strength to those who have been weakened by them.

In the gravel and stone they have proved highly beneficial; and have been taken to great advantage in the scurvy, in colical complaints, and in habitual gout and rheumatism.

Indigestion, and loss of appetite, are said

to be relieved by the use of the Bristol waters; and they are advised to be used externally in washing old sores and ulcers, whether of a scrophulous or cancerous nature, and as a collyrium in case of inflamed eyes, and in particular where the eyelids are tender or excoriated.

BROMLEY, Kent.

This water is a chalybeate, of nearly the same qualities, though in a less degree, as the Pyrmont water.

BROUGHTON, near Coln, Lancashire.

The water of this spring is strongly impregnated with sulphur, and turns silver or copper black; it also contains a proportion of sea salt and purging salt.

It is recommended to be used internally and externally, in scrophulous and scorbutic cases; and in the latter way, for old weaknesses occasioned by palsy, strains, or the like.

Drank in large quantities, to the amount of a quart or two at a time, it acts as a purgative; taken more sparingly, it operates as an alterative, and has been advised in disorders arising from obstructions.

BUGLETON, or BUGLAWTON, Cheshire,

Is a sulphureous water, intensely cold, and resembling in virtues and operation the Askeron water, before described.

BURLINGTON, Yorkshire.

This water is a lively chalybeate, but a less active purgative than some other English waters of the same properties.

BURNLEY, Lancashire,

Differs little from the Burlington water.

BUXTON, Derbyshire.

These waters, which have long enjoyed a considerable degree of reputation, are of a moderate warmth, somewhat hotter than the

the Bristol waters; but not reaching to the same degree of heat as those of Bath.

They are clear and transparent, and perfectly inoffensive to the taste, containing neither steel, sulphur, or any kind of acidity in their composition; but having a small quantity of sea salt, and a still smaller portion of purging salt.

The Buxton waters are recommended in bilious colics, in habitual vomitings, occasioned by too great irritability of the stomach, in the heartburn, loss of appetite and indigestion, and in almost every disorder of the intestines.

They are also said to be serviceable in cases of internal bleeding; in the *fluor albus* or whites; in paralytic disorders, convulsions, and cramps; in asthmatic complaints, and as a remedy for barrenness and wasting of the flesh.

They have been also used internally for inflammations of the kidneys and liver, and in consumptive cases, where the lungs are affected; and they have been applied externally to old strains, and hard tumours of the joints; in aches arising from gout or rheumatism, in contractions of the limbs, in the scurvy, and in eruptive complaints, such as scabs, blotches, ring-worms, and the like.

The season for drinking the Buxton waters is usually from the beginning of May to the latter end of October, though they may be safely used through the winter, if the situation of the patient requires a longer perseverance than the ordinary season.

CARGYRLE, near Chester.

The water of this spring resembles that of Barrowdale, but it does not possess so strong a purgative quality.

CARLTON, near Newark, Nottinghamshire.

This is a chalybeate water, of common description; only that it has a very disagreeable smell, like the drain of a dunghill.

CAWLEY, Derbyshire.

This water is nearly like that of [the As-

keron spring, being impregnated with sulphur, and slightly purgative.

CAWTHORP, near Bourne, Lincolnshire,

Is a chalybeate, impregnated with sea salt, which is obvious to the taste: it is said to correct acidities, and is moderately purgative.

CHADLINGTON, Oxfordshire, near Chipping Norton.

This water smells strongly of sulphur, and is salt to the taste; it purges gently, and is used in diseases of the skin, and in old ulcers and sores.

CHELTENHAM, Gloucestershire.

The water of this spring hath been long in high reputation, for restoring lost appetites, preventing indigestions, and strengthening the tones of the stomach and bowels; it is also recommended in the scurvy and gravel.

It is a chalybeate, and operates by purging, without griping or other uneasy sensations; the dose from one half pint to five or six, according to constitution, habit, and other circumstances.

CHIPPENHAM, Wiltshire.

This is also a chalybeate water, possessing the ordinary qualities.

CLIFTON, near Deddington, Oxfordshire.

This water is transparent and tasteless; and operates chiefly by urine, though it is also somewhat purgative; it is recommended in disorders of the skin.

COBHAM, Surry.

This is a strong chalybeate water, of the usual quality.

CODSALWOOD, near Wolverhampton, Staffordshire.

The water of this spring is strongly impregnated with sulphur, and is of the same nature

nature as the several sulphureous waters already described.

COLCHESTER, Essex.

A purging mineral water, resembling that of Epfom.

COLURIAN, Cornwall, in the parish of Ludgvan.

This seems to be a common chalybeate water.

CUMNER, near Oxford.

A mineral purging water, somewhat discoloured and chalky, and must be taken in considerable quantities, to produce any sensible operation.

COVENTRY.

This water is chalybeate, and purges lightly, creating an appetite, and giving an unusual flow of spirits.

CRICKLE Spa, near Broughton, Lancashire.

A purgative water, strongly impregnated with sulphur, but having a portion of sea salt: its virtues are the same with other waters of the like kind, which have been already described.

CROFT, near Durham.

The water of this spring nearly resembles that of Crickle spa, but is somewhat less purgative.

CUNLEY HOUSE, Lancashire.

This may be comprized in the same description as the last-mentioned.

DERBY.

A strong chalybeate water, resembling that of Tunbridge.

Dog and Duck, in St. George's Fields, Surry.

This is a mineral water, transparent and nearly tasteless; it purges mildly, but a large quantity is required to produce any

effect, and it is therefore usually quickened with purging salts when it is meant to operate freely. As an alterative it is recommended in complaints of the skin, in the scurvy, and scrophulous disorders; it is likewise said to be a remedy for cancers, and in these cases may also be used externally.

It acts as a diuretic, but is too cooling and relaxing for persons of weak and debilitated constitutions.

DORTSHILL, near Litchfield, Staffordshire.

Here are two waters at this place of different natures and qualities, the one salt and purgative, bearing a weak resemblance to the Barrowdale water; the other is a lively chalybeate.

DRIGWELL, Cumberland.

A smart chalybeate of a vinous taste, and sulphurous smell, not unlike the Deddington water, and possessing nearly the same virtues.

DROPPING WELL, Knaresborough, Yorkshire.

The water of this celebrated spring is perfectly well tasted, transparent, and intensely cold, and possesses petrifying qualities.

It is prescribed as a remedy for internal hæmorrhages and fluxes, and externally for weaknesses in the joints and limbs.

The dose of this water is from one pint to two, at different draughts in a day, and it is adviseable to take a dose or two of mild purging physic, previous to a course of it.

DULWICH, on Dulwich Common, Surry.

This water was some years ago much celebrated, though it has not lately been in great repute, being rather out of fashion.

It contains a certain portion of purging salt, and a smaller quantity of sea salt, is transparent in a glass, brackish to the taste, and somewhat bitter, though the latter is more

more perceivable on the palate after the water has been swallowed.

It has been recommended in various disorders, and in particular in those disorders of the intestines which are occasioned by obstructions.

The nervous system is said to be strengthened by the use of this water, and it is advised in the scurvy, jaundice, and green sickness; as also in the gravel, and difficulty, or suppression of urine.

The course of drinking this water is, to commence with a small quantity, to increase it daily for a fortnight, till the amount is three or four quarts a day, and then to lessen it gradually in the same manner.

DURHAM, near the city of Durham, on the North side of the river Wear.

This water is slightly impregnated with sea salt, and strongly with sulphur, and it's waters used intetnally are cleansing and purgative; and externally, strengthening.

Near the last-mentioned spring is another, the waters of which are more salt, and more strongly purgative.

EPSOM, Surry.

This water has also formerly enjoyed a higher degree of reputation than at present, it is perfectly transparent, without smell when it is fresh, and somewhat brackish to the taste; if it is kept for any considerable length of time, it grows putrid, and the taste becomes more salt and disagreeable.

Taken in the quantity of a quart or three pints it is purgative, in smaller doses it acts as an alterative, and in either case is said to be useful in the same disorders for which the Cheltenham waters are prescribed. It may be used externally as a lotion for sores, ulcers, and scabby eruptions on the skin.

FELTSTEAD.

This is a light chalybeate water, operates chiefly by urine, and is recommended in

lowness of spirits, indigestions, and loss of appetite.

FILAH, near Scarborough.

This water, which is a chalybeate, is more sensibly impregnated with salt than most others of the like kind. Several quarts of it are required to produce a purgative effect, it's principal operation being by urine.

GAINSBOROUGH, Lincolnshire.

The water of this spring is a light chalybeate, weakly impregnated with sulphur, and is useful in those diseases for which chalybeate waters are usually prescribed.

GLASTONBURY, Somersetshire.

The virtues of these waters were said to have been miraculously discovered about thirty years ago; and they continued for some years in high esteem; but have been lately much disregarded.

These waters are limpid without taste or smell, whilst they are fresh; but grow putrid if they are kept.

They have been principally recommended in scrophulous and scorbutic disorders and in diseases of the skin.

HAIGH, near Wigan, Lancashire.

This water is chiefly useful as a styptic to stop internal bleedings: it is impregnated with green vitriol; and acts both as an emetic and purgative.

HAMSTEAD, Middlesex.

This water was formerly in high estimation, and it's virtues and efficacy have been celebrated in several elaborate treatises.

It is a chalybeate water of a perfectly transparent colour, though it tinges the vessel in which it is suffered to stand, and the channel in which it runs off with an ochre cast.

It's taste is strongly mineral, though not unpleasant; and after it has been some

time in bottles, it sparkles like the Pyrmont water.

Three or four glasses of this water are a proper dose, and should be taken at small intervals as early in the morning as possible, as some of the mineral particles are said to be attracted and drawn off by the sea.

It is recommended as serviceable in the removal of glandular obstructions; in the scurvy, leprosy, gout, stone, and rheumatism; in eruptions of the skin; in the piles, gravel and stone; in nervous and hysteric disorders; in weakneses, whether acquired or constitutional; in all complaints of the stomach and bowels; and in a great number of chronic diseases.

HANBRIDGE, Lancashire.

This is a chalybeate water, purgative in a very slight degree, and it is said to have been serviceable in disorders of the stomach, indigestion, nervous and hysteric complaints.

HANLYS, Shropshire, near Shrewsbury.

The two waters of this place are of different qualities; one a transparent purging water, somewhat salt and bitter to the taste, sparkling and rising with great impetuosity at the spring-head; nor does it suffer any alteration in colour or virtue by being exposed to the air: the dose of this water is from one pint to two, taken in three or four draughts.

The other water is a chalybeate, lively in appearance, and vinous to the taste; drank at the fountain, it possesses the virtues of other chalybeate waters, but it loses them by being kept.

HARROWGATE, Yorkshire.

The waters, though they rise from four different springs, are alike in quality; they contain a considerable portion of sea salt, and a small quantity of purging salt; are saline in taste, and are so strongly im-

pregnated with sulphur, as to make it very perceptible to the smell. They are transparent, and throw up a great number of air-bubbles at the surface.

When these waters are taken as purgatives, the dose required will be from two pints to four; as an alterative, smaller quantities are sufficient; and in this way they are recommended in scorbutic and scrophulous cases, and in diseases affecting the skin: they may be used externally in these cases as a lotion or bath.

They are said to be peculiarly serviceable in disorders occasioned by obstructions; such as the green sickness, gout, and jaundice, and to be effectual in the destruction of worms.

Externally, they are applied to relieve old weakneses, either occasioned by palsies and other disorders, or by strains and accidental injuries; and to remove eruptions on the skin.

HARTLEPOOL, Durham.

Is a chalybeate water, perfectly limpid, and agreeably tasted, but is so impregnated with sulphur, as to be discoverable by the smell.

It acts by stool and urine, and is prescribed for indigestion, and pains of the stomach; for bilious and nervous colics; for obstructions of the female discharges; for hypochondriac and hysteric complaints; for hectic heats, scurvy, and recent ulcers.

HOLT, Wiltshire.

This water is transparent, and without any disagreeable taste or smell; it is purgative, but requires so large a quantity to be taken to produce any operation, that it is more frequently given as an alterative, in which way it is said to restore the appetite, help digestion, and allay extraordinary heats.

Externally it is recommended in scorbutic, scrophulous, and cancerous cases; and especially where the bones are affected, to wash

wash the sores or ulcers; it is also said to be of use in the piles and in sore eyes; but whenever it is used externally, an internal course of it must be pursued at the same time.

JESSOPS-WELL, Surry.

This water, though slightly chalybeate, is also strongly purgative, and is very disagreeable to the taste.

For a purge, the dose must be near a quart, more or less, according to constitution and other circumstances; it operates pretty sharply, but without griping or sickness, and passes also by urine.

It raises the patient's spirits, and as the quantity required is comparatively small, it is a pleasant and easy purge.

Taken as an alterative, in small quantities, it is said to be highly beneficial in scorbutic cases; but it ought to be used at the spring, as it does not retain its virtues if it is kept.

ILMINGTON, Warwickshire.

The water of this spring, which is chalybeate, abounds in fixed air, and is transparent and sparkling like the Pyrmont water.

It does not commonly purge, but is said to operate by urine to great advantage, in obstructions of the intestines, in the early stages of dropsies and jaundices, in the gravel; and in cases of obstructed or suppressed urine; it is also recommended internally for the scurvy, and externally for eruptions occasioned by that disorder, and for old ulcers.

It must be perfectly well corked, to preserve its virtues any considerable time after it is drawn from the fountain.

INGLEWHITE, Lancashire.

This is a chalybeate water, strongly impregnated with sulphur, and is recommended as a remedy for the scurvy and other disorders of the skin.

ISLINGTON, near London.

The water of this spring is a light chalybeate, acts principally by urine, and requires to be drank in pretty considerable quantities.

It is said to be serviceable in hypochondriac, nervous, and hysteric cases, to help digestion, restore the appetite, brace up relaxed habits, and raise the spirits. It is also recommended in female weaknesses, whether occasioned by frequent miscarriages, or the *fluor albus*; in obstructions of the intestines, in the gravel, palsy, scurvy, and diseases of the skin.

KIDDLESTONE, Derbyshire.

This water though perfectly clear at the spring, turns black if it stands, and changes the colour of silver or copper, being very strongly impregnated with sulphur: it is abominably foetid—and its virtues and effects are similar to those of the Harrogate water.

KENSINGTON, Middlesex,

Is a purging water, resembling that of Acton.

KILBURN, Middlesex.

This water is also purgative, in nearly the same degree as that of Bagnigge Wells.

KYNALTON, Nottinghamshire.

The water of this spring is clear and cool; it has a saline taste, and a weak purgative quality.

KINGSCLIFFE, Northamptonshire.

This water is chalybeate, and slightly laxative.

KIRKBY THOWER, Westmorland.

Two springs rise on nearly the same spot, the waters of which differ but little in quality, being both transparent, and having a chalybeate

chalybeate but not disagreeable taste. The lower spring is said to be the strongest; but even of this, several quarts are required to purge. It corrects acidities, and is a remedy for the heartburn.

KNOWSLEY, Lancashire.

The water of this spring is a chalybeate, strongly tinged with iron, which is perceptible both to the smell and taste.

It is less purgative than the Cheltenham and some other waters of the same nature, requiring two quarts or more to produce this effect.

SALES SPA, Lancaster.

This is also a chalybeate water, perfectly transparent, and less offensive to the smell and taste than the last-mentioned; if taken in considerable quantities, it acts by stool, urine, and vomit, and is recommended as an alterative in most chronic diseases, except hectic and other internal fevers, inflammations or ulcerations.

LATHAM, Lancashire.

This water resembles that of Sales Spa.

LLANDRINDOD, Radnorshire, South Wales.

This spot produces three different springs of mineral water, of various qualities. The first is called the pump water, is salt to the taste, and operates by purge; it is prescribed both internally and externally in scorbutic and scrophulous disorders, and in scabby eruptions and other diseases of the skin.

It is to be drank at the spring, by half-pint glasses at intervals, using exercise in the intermediate times, to promote its operation; as soon as it begins to work, it will be right to discontinue drinking it.

As an alterative, it is advised to be taken in the quantity of two or three quarts in a day, according to circumstances; and of whatever quantity is necessary, half may be taken before breakfast, in three draughts,

at equal distances in an hour; and the other half must also be divided into three draughts, one to be taken between breakfast and dinner, at a proper distance from each meal, another between dinner and supper, and the third at bed-time.

The summer is the season for drinking this water, and the patient must persevere in the use of it many weeks, if he hopes to reap benefit from it.

In this way it is said to be serviceable in hysterical and hypochondriac disorders, flatulencies, acidities, and indigestion.

The second water of Llandrindod is strongly impregnated with sulphur, of which it smells very offensively, and turns metals, and even the channel through which it runs off, black.

It is recommended not only in the same disorders as the chalybeate water, but in hectic fevers, gouty and rheumatic cases, gravel, bloody flux, and as a fomentation in weaknesses of the joints, old strains, and the like.

The quantity necessary for a dose must be regulated by constitution, habit, age, and sex; at any rate as much of it may be drank with safety as sits easy on the stomach, and proves inoffensive to it, but by no means more; and in order to enable the stomach to bear a sufficient quantity to answer any good purpose, it will be prudent to commence the course with a very small portion, and to increase it by degrees.

The third water, which issues from a rock, is slightly chalybeate, and perfectly transparent; both which qualities it loses on being exposed to the air, as well as that of fermenting with a mixture of sugar and other acid.

It is said to be efficacious in restoring relaxed habits, and weaknesses of the nerves and muscles; and is also advised in nervous fevers, obstructions of the bowels, asthmatic complaints, and the scurvy.

LLANGIBBI,

LLANGIBBI, Carnarvonshire.

This water, which is in great reputation in the neighbourhood, is rough and somewhat bitter to the taste.

It is given in paralytic, epileptic, and rheumatic cases, and is said to have afforded relief in many disorders, which occasion ulcers or eruptions.

MALTON, Yorkshire.

This water, which is strongly a chalybeate, is salt to the taste, and somewhat bitter.

It is said to be serviceable in complaints of the stomach, and indigestion; in weaknesses occasioned by violent evacuations; and in some other chronic disorders; operating as a purgative and diuretic, and if it meets a foul stomach, as an emetic. The dose may be from one quart to three, according to habit and circumstances.

MALVERN WELLS, Gloucestershire.

These springs, which rise at some distance from each other, are nearly of the same description, being both chalybeate, light, agreeable to the taste, and less impregnated with earthy particles than most other waters.

They are recommended in glandular complaints; in scorbutic, scrophulous, and cancerous disorders; in diseases of the skin, sores, and ulcers; in obstructions of the female discharges; in palsy, gout, gravel and stone; and in external inflammations, particularly of the eyes.

Contrary to all other baths, it is usual here to bathe in the shirt or shift, and to leave it wet about the body, and suffer it to dry there; it being remarkable, that the waters of these springs, though free from salt, are no more apt to give colds than the sea water. Linen cloths, kept constantly wet, must be applied to the diseased parts.

But, previous to the external use of these waters, they should be taken internally for

some days, in such quantities as the stomach will bear; as, in some cases, they excite sickness and purge, though they more commonly act by urine.

MARKSHILL, Essex.

A chalybeate water, differing little in description, operation, or virtues, from the springs of Hampstead, Islington, and others of the same nature.

MATLOCK, Derbyshire.

The waters of the several springs at this place are very slightly chalybeate, and occasion petrification; in other respects, they are similar to those of Bristol, being also of a moderate warmth: they are recommended in most cases where the Bristol waters are used.

MAUDSLEY, Lancashire.

This water is strongly impregnated both with sulphur and sea salt, has a blue cast, an offensive smell, and a disagreeable saltish taste.

It acts by purge, and is advised in scorbutic, scrophulous, and other chronic disorders.

There is also another spring in the same neighbourhood, called the *Moss-house* water; this is a chalybeate, resembling in all respects that of Islington.

MORETON, Shropshire.

This water operates well as a purge, and diuretic, and is of a cooling quality; it is said to be excellent, used externally in scrophulous cases, where the bones are affected.

NEVILHOLT, Leicestershire.

This water is recommended as an antiputrescent; it is perfectly transparent and void of smell when it is fresh from the fountain, but loses its clearness and becomes foetid when it is exposed for any considerable

time to the air; it is somewhat rough and bitter to the taste.

It acts by stool, urine, and perspiration, but requires a pretty large dose to produce the former effect.

It is recommended in all cases of internal weakness and relaxation, discharges of blood and other old fluxes; gleets in both sexes, dropsy, wasting of the flesh, gravel, stone, relics of the gout and rheumatism, scurvy, and other chronic complaints; in acute and inflammatory diseases it is said to be rather hurtful.

NEWNHAM-REGIS, Warwickshire.

These waters, which rise from three springs, are chalybeate, and also lightly impregnated with sulphur; they act by stool and urine, and have been recommended in several chronic disorders, particularly internal weaknesses, whether occasioned by excesses or disease.

NEWTONDALE, Yorkshire, North Riding.

The water of this spring is perfectly cold, and possesses a strong petrifying quality; it is said to be efficacious in stopping bleedings, and assisting internal weaknesses; as a bath, it is recommended in contracted and stiffened joints, and other complaints of the like kind, of long standing.

NORMANBY, near Pickering, Yorkshire.

This water is impregnated with sulphur, and offensive to the smell; its appearance is transparent and sparkling, like the Pyrmont water; it acts as a mild purge taken in sufficient quantity, and is prescribed in scrophulous and scorbutic cases, diseases of the skin, and obstructions.

NOTTINGTON, Dorsetshire, near Weymouth.

This water turns silver of a bluish colour, containing a considerable quantity of sulphur; it has a foetid smell, and unpleasant taste.

It is said to be efficacious in cleansing the skin of eruptions, but should for this purpose be drank in sufficient quantities to purge.

ORSTON, near Thoroton, Nottinghamshire.

The water of this spring, though it has a smell of sulphur, and a taste somewhat chalybeate, is notwithstanding agreeable to the palate; it sparkles in a glass like Champagne, and produces an effect somewhat similar to large draughts of that wine, occasioning a kind of temporary giddiness; but it loses this, as well as its purgative quality, by being long exposed to the air.

It is said to be useful in disorders of the stomach and bowels, obstructions, gravel, and hectic heats.

OULTON, Norfolk.

A chalybeate water, resembling those in the neighbourhood of London.

PANCRAS, Middlesex.

The water of this well acts as a purge, and by urine; it contains a purging salt, and a small mixture of sea salt, yet is almost tasteless.

It is said to be useful in the gravel and stone, in the scurvy, and to help digestion and restore the appetite.

QUEEN-CAMEL, Somersetshire.

This water contains chalk, sea salt, and sulphur; its smell is offensive, like that of gunpowder; it changes silver black or yellow, and communicates these colours to the channels through which it runs.

It has been prescribed in scrophulous and scorbutic cases, and in diseases of the skin, and must be taken internally, at the same time it is used as a bath.

RICHMOND, Surry.

A purgative water, of nearly the same description as that of Pancras.

ROAD,

ROAD, Wiltshire.

The water of this spring is chalybeate, with a mixture of sulphur perceptible to the smell; it must be drank at the spring, and is prescribed for the same disorders as the Queen-Camel water.

ROUGHAM, Lancashire,

Is a weak salt water, useful in clearing the blood of acrimonious humours, and in scorbutic and scrophulous cases: it requires a considerable quantity to purge briskly.

ST. ERASMUS'S WELL, Staffordshire.

This water is of the colour of fine small beer, without smell, and not disagreeably tasted; it purges smartly, if drank in large draughts, and it's virtues are nearly similar to those of the Rougham spring.

SCARBOROUGH.

Near this town are two springs, distinguished by the several names of the *purging* and *chalybeate* wells; but they seem to differ more in degree of strength than in the properties of the waters; they are both brisk, active, and pungent to the taste, throwing up bubbles of air when they are poured out of a bottle into a glass, and both apparently abounding in fixed air.

They differ, however, somewhat in taste, the purging water being rather bitter, the chalybeate a little vinous. Neither of these waters will bear exposure to the air.

They have been recommended in general relaxations, and to restore the system after too copious or excessive evacuations of any kind; in all disorders of the stomach, arising from wind, indigestion, or acidity; in hypochondriac and hysteric complaints; in nervous disorders, obstructions, asthma, scurvy, and rheumatic pains; and they are said to be excellent in allaying the heat of hectic fevers.

The *purging water* may be drank in half-pint glasses at small intervals, till stools are

procured, for which purpose from one quart to two is generally sufficient. The chalybeate water is less purgative, operating principally by urine; both waters contribute to give the patient unusual alacrity of spirit.

SEND and PAULSHOLT WATERS, in Wiltshire.

These springs rise at a small distance from each other, near the town of Devizes; they are chalybeates, acting by urine, and are prescribed in the same cases as the other waters of the like description.

STOCKPORT, Lancashire.

This is likewise a chalybeate, rather more strongly impregnated with iron than the Tunbridge water.

SHADWELL, Middlesex.

This water contains a greater quantity of green copperas or vitriol, than that of any other spring in Great Britain.

It is transparent, but hath rather a darkish cast of colour, and is rough, astringent, and somewhat acid to the taste.

It is given internally in discharges of blood, fluxes, the whites, and other gleets; in the scurvy, king's evil, and leprosy, and in jaundice and other disorders occasioned by obstructions.

Externally, it is recommended in all disorders which produce sores, ulcers, or scabs, and may either be used as a lotion, or the parts affected may be dressed with linen rags dipped in it; but the application of the water in this way should always be preceded by the internal use of it, which should also be continued during the cure.

SHAPMOOR, Westmoreland.

This water contains a mixture of sulphur and purging salt, and is recommended in chronic obstructions, and in scorbutic and scrophulous cases.

It is not altogether so strong as the Aske-
ron

ron water, requiring a quart or three pints to purge.

SHETTLEWOOD, Derbyshire.

This is nearly of the same description as the last-mentioned.

SHIPTON, Yorkshire,

Is also impregnated with sulphur, and contains a portion of purging salt; and its virtues are nearly the same as those of the Shapmoor water.

SOMERSHAM, Huntingdonshire.

This water rises on the side of a small hill, near the high road between St. Ives and Somersham, about two miles and a half, or three miles from the former place.

It is a chalybeate, strongly impregnated with the vitriol of iron and allum; is much stronger in dry than wet seasons, and may be drank at the spring-head from the beginning of May to the beginning of October, though it will bear carriage to any distance; nor will its virtues be impaired by keeping, provided it is bottled at a proper time, and well corked; but it should be carefully decanted or strained after keeping, as it will drop a sediment.

It may be taken before breakfast, in the quantity of three large wine-glasses, each of which should be warmed with a small quantity of common spring water heated, and they should be swallowed at the distance of half an hour between each draught, the patient in the intervals keeping in gentle motion, either on foot or on horseback; sitting still, or reading, writing, or other sedentary employment, immediately after taking this water, being apt to bring on a giddiness, and to occasion sickness at the stomach; after each glass it will also be proper to eat a little preserved orange-peel, or a few cardamom or carraway-seeds.

This water is also sometimes directed to be taken mixed with an equal quantity of new and warm cow's or ass's milk, or a

wehly made from it, by boiling equal portions of the water and milk till the curd separates, which should then be carefully taken away. This method of administering it is adviseable in consumptive cases.

But in whatever way it is given, it will be necessary to purge the patient before the course is begun, and this may be done with such medicines as are most suitable to the disorder and constitution; in ordinary cases a solution of half an ounce of Rochelle salts, in a glass of the chalybeate water, warmed as before directed, will be a proper purging dose. It may be proper to observe, that this water is apt to change the colour of the stools, which generally become black.

It is recommended in debilities of the stomach and bowels; in dysenteries; in putrid crudities of the stomach; in obstructions of the liver and spleen; in the jaundice, when it affects grown people; in uterine complaints; schirrhous, cancers, hæmorrhages, obstructions, the whites, and weaknesses after miscarriage; in the stone and gravel, the diabetes and disorders in the bladder and urinary passages; in hypochondriac and hysteric complaints; in the scurvy, and consumptions from scorbutic habits; in rheumatic pains, and the remaining weaknesses of the gout.

It may also be applied externally to foul ulcers and cancers.

But it is not adviseable for persons who are troubled with acidities in the stomach, which it rather tends to increase than correct; nor should it be prescribed to those who are affected with vertigo, or giddiness in the head, asthma's, dropsies, or swelled legs; in obstructions of the female discharges in full habits it is hurtful, nor should it be taken in any case, without proper previous evacuation by purging.

A regimen as to diet is absolutely necessary during a course of these waters; the food should be light, plain, and easy of digestion.

STEN-

STENFIELD, Lincolnshire.

This is a transparent chalybeate purgative water, inoffensive to the smell and taste, somewhat spirituous and vinous when it is first drawn, but spoils on exposure to the air for any considerable time.

It possesses nearly the same virtues as the Hartlepool water.

STREATHAM, Surry.

This water is gently purgative, rather salt and disagreeable to the taste; it is of a yellow cast, and when suffered to stand, is covered with a scum shaded with blue, green, and yellow.

The dose is from one quart to two, and it has been recommended in complaints of the eyes, and to promote urine.

STANGER, Cumberland.

The water of this spring, which rises near Cockermouth, is a chalybeate, impregnated with vitriol and a mixture of sea salt; it acts as a purgative and emetic; and when taken to any considerable quantity, its operation is rather violent.

The virtues of this water are nearly the same as those of Shadwell.

SUTTON-BOG, Oxfordshire.

The water of this spring contains a mixture of alkaline and sea salt, and being strongly impregnated with sulphur, is extremely offensive to the smell; nor is the taste of it, which is salt and acrid, less disagreeable.

It changes the colour of silver, turning it black; and being suffered to stand, drops a black muddy sediment, and a bluish scum covers the surface of it.

It acts gently as a purgative, and is used both internally and externally in scorbutic and scrophulous ulcers, and diseases of the skin; in the external application of it, it should be shook, so as to disperse abroad the sediment, or the parts affected may be dressed with the mud itself.

SWANSEA, Glamorganshire, South Wales.

This is one of those vitriolic waters which are said to stop internal hæmorrhages, and violent purgings; it may also be applied to stay external bleedings.

SYDENHAM, Kent.

This is a purgative mineral water, somewhat resembling that of Epsom, but less powerful.

TARLETON, near Preston, Lancashire.

The water of this spring is a purgative chalybeate, and is also lightly tinged with sulphur: from one quart to two will produce stools; and it is said to be serviceable in scurvy, rheumatism, and asthma; in disorders of the stomach, and general relaxation.

TEWKSBURY, Gloucestershire, and WALTON and TEDDINGTON in that neighbourhood.

The waters of these several springs resemble in description and effects the purging waters near London.

TETFORD, Norfolk,

Is a chalybeate, somewhat vinous to the taste, and is prescribed in disorders of the bowels and stomach, in relaxations, lowness of spirits, and the first stage of consumptions.

THOROTON, Nottinghamshire.

A chalybeate purging water, said to be useful in the scurvy, in bilious and nervous cholics; in disorders of the stomach, and female obstructions; in hectic fevers, and hypochondriac complaints.

THIRSK, Yorkshire, North Riding.

This is also a chalybeate water, acting as a purge and diuretically; and it is said to be useful in scorbutic and scrophulous cases, and in diseases of the skin.

TIBSHELF, Derbyshire.

This water is said to resemble the Pyrmont water in appearance and virtues.

TILBURY, Essex, near Tilbury Fort.

This water has long been in good reputation, which has rather increased of late.

It is somewhat rough on the tongue after being turned round the mouth, though swallowed as an immediate draught it is soft and pleasant to the palate; its colour is yellowish, and after it has stood some time, it appears covered with an oily scum, shaded with different colours.

A mixture of spirit of vitriol with this water, produces effervescence; it curdles with common soap, but mixes perfectly with milk; boiled alone, it assumes a milky appearance, but may be fined by a small quantity of acid of any kind.

It is recommended to help digestion, excite an appetite, and strengthen the stomach; and is said to be efficacious in scorbutic and scrophulous disorders, and in those diseases of the skin which are occasioned by glandular obstructions; it is also prescribed in excessive evacuations, in acidities, and in disorders arising from relaxation.

From a pint to a quart, according to circumstances, may be taken in a day; in some cases it purges, but in most acts as a diuretic, and is on that account thought useful in dropsies.

It is remarkable, that this water produces a sensation in the skin, like that of a benumbed limb when it approaches the fire, though in a less degree.

TUNBRIDGE WELLS, Kent.

The two small medicinal springs, which are known by the name of Tunbridge Wells, rise contiguous to each other, about five miles to the southward of Tunbridge; they are situate in a valley, surrounded with rocks and cliffs, the only productions of which are furze and heath.

There is no perceptible difference in the strength or quality of the waters of these springs, which are chalybeate, taste strongly though not disagreeably of iron, and contain also a small portion of sea salt.

They are recommended as efficacious in the removal of obstructions, such as occasion disorder in the liver and spleen, agues, jaundice, dropsy, green sickness, whites, obstructed or excessive female discharges, colic, gravel, stone, suppression of urine, and ulcers of the kidneys or bladder.

They are also prescribed in dysenteries or bloody fluxes, internal inflammations, pains in the stomach, and loss of appetite; head-ache, giddiness, convulsions, palsy, apoplexy, lethargy, and defluxions of rheum from the head: they are said to stop hiccups and vomiting; to relieve nervous, hypochondriac, and hysteric complaints; and to invigorate the animal system, and raise the spirits; and are reputed to be particularly successful in the destruction of worms.

Externally applied, they are said to assist weak and sore eyes, and to remove pimples and other eruptions from the skin.

The summer is the proper season for drinking them, from the beginning of June till Michaelmas; they are held to be in the best condition when the weather is dry and clear.

The waters are advised to be drank at the wells, the exercise of going for that purpose, and returning, adding in no small degree to the virtue of them, and the water itself being considerably injured by keeping.

Some physicians direct a small quantity of common, or other purging salt, to be dissolved in the first glass; and others recommend caraway or cardamom-seeds, or some spice or warm confection, to be taken after each glass, as this water is apt to occasion sickness at the stomach, and retching to vomit, especially if the patient's stomach is foul.

The

The quantity required can only be ascertained by circumstances; the age, constitution, and complaints of the patient, must be consulted, and more or less of the water administered, as may be found necessary; but the draughts should not succeed each other too quickly, nor should each consist of more than a wine-glassful, which may be repeated at the distance of ten minutes or a quarter of an hour, and so till the whole dose is swallowed, before breakfast.

Though moderate exercise will generally contribute to the success of these waters, yet all violence is to be avoided; the gentle motion of a horse seems most likely to answer every good end.

It is impossible to determine the length of time necessary to compleat a course of these waters; this also must depend on the situation of the patient, and the nature of his complaint: but it is always adviseable to begin it with small quantities, increasing gradually for a certain time, and then decreasing in the same way; and if the disorder is not compleatly subdued, to begin a new course, and pursue it in the same manner.

Some preparation is advised to a course of these waters: in most cases gentle purging is sufficient, but in gross and sanguine habits other evacuations are required.

A regimen is also necessary; the food should be light, and that part of it which consists of animal flesh, should be of mutton, fowls, and game, rather than beef or pork; veal and lamb may also be allowed; the bread should be pure and well baked, and the less wine is taken the better; excesses in eating or drinking will render the waters useless, nor should the passions be disturbed by violence of any kind.

UPMINSTER, Essex, near Brentwood.

The water of this spring is strongly impregnated with sulphur, and contains also a portion of purging salt.

It is recommended in obstructions, worms, and foulness of the bowels, and in scorbutic, scrophulous, and leprous cases.

WARDREW, Northumberland.

This water, which rises on the banks of the river Arden, contains also sea salt and sulphur, is extremely cold, and may be found useful in the same cases as the Upminster spring: it is also prescribed for old aches, strains, and contractions.

WEATHERSTACK, Westmoreland.

A weakly purgative chalybeate water, containing a portion of sea salt, and at certain seasons of the year sulphur; it's virtues are the same as several waters of the like description already mentioned.

WELLENBOROUGH, Northamptonshire.

This water is slightly chalybeate, resembling the chalybeate waters round London.

WEST ASHTON, or STEBBLE ASHTON, Wiltshire.

A water similar to that last described.

WESTWOOD, Derbyshire, near Tanderley.

The water of this spring is a chalybeate, but impregnated with vitriol, and is principally used in external applications to old ulcers in the legs.

WHITE-ACRE, Lancashire.

This water is chalybeate, and is said to possess rather an astringent than a purgative quality, and may therefore be useful in hæmorrhages, excessive discharges, and relaxations; it is a lively sparkling water, and perfectly transparent.

WIGAN, Lancashire.

A chalybeate water, answering the description of those near London.

WIGGLES-

WIGGLESWORTH, Yorkshire, West Riding.

This spring rises about four miles from the town of Settle, in the parish of Long Preston; the water is impregnated with sulphur, and contains also a portion of sea salt; it is of a blackish colour, and disagreeable taste.

It is said to excite vomiting, taken in moderate quantities, and larger draughts of it purge; it is principally used to clear the stomach and bowels.

WITHAM, Essex.

This spring rises about three quarters of a mile from the town of Witham, into a small reservoir, from whence it is brought up by a pump; it is certainly a chalybeate, though it wants that peculiar brisk and piquant taste which distinguishes most of the waters of this class; when perfectly fresh, it is agreeable to the palate and the stomach, but being suffered to stand, it becomes vapid, assumes a milky appearance, a variegated scum arises on the surface; and after some time depositing a brownish sedi-

ment, it loses it's chalybeate taste and properties.

It operates chiefly by urine, and is recommended in nervous, hypochondriac, and hysteric disorders; to promote digestion and restore the appetite; to check vomiting, and allay hectic heats; to relieve chronic colical pains, and to restore the system, when it has been debilitated by disease or excesses.

It is also prescribed for obstructions, and disorders arising from them, such as jaundice, agues, and the first stages of the dropsy; and is said to have afforded relief in the scurvy, asthma, and gravel.

It must be drank at the spring (for it will not bear carriage) in such quantities as the stomach will receive without nausea.

WIRKSWORTH, Derbyshire.

This water is slightly chalybeate, and contains a mixture of purging salt and sulphur; it is given in the scurvy, king's evil, and foulnesses of the skin.

C H A P. III.

Of the Spas, Mineral and other Medicinal Waters of Scotland.

IT is somewhat extraordinary, that in a country of such extent, so mountainous in parts of it, and so various in soil, a very few medicinal waters only have been discovered, and brought into use and reputation; and as the study of medicine is cultivated to the highest degree of perfection in the universities of this kingdom, which have produced numbers of physicians, not only eminent in their practice, but distinguished by the learning and elegance of their writ-

ings, and their zeal in researches after medical knowledge and information, we are inclined to believe, that this part of Great Britain is less supplied with waters of peculiar virtues, than the southern parts of these united kingdoms.

The following, however, are those which have been found most salubrious, and the efficacy of which has been determined by experience and investigation.

CAR-

CARSTARPHIN.

This spring rises about two miles from Edinburgh, contains a small portion of sea salt, and is slightly impregnated with sulphur. Here is also another spring nearer to the last-mentioned city, by the water of Leith.

These waters, of which the latter is the strongest, act sometimes purgatively, but for the most part by urine.

They are generally administered as alteratives, in obstructions, scrophulous and scorbutic cases, and in diseases of the skin.

DUNSE.

This water is a brisk and light chalybeate; it tastes of the iron, and contains a small portion of sea salt.

It possesses nearly the same virtues of the spa waters of Germany, but in a much less eminent degree.

GLENDY.

The water of this spring, which rises in the county of Mearns, is a strong chalybeate, of the same nature as the Islington water, but much more powerful.

HARTFELL, Annandale,

Is a vitriolic water; and, like others of the same quality, it is prescribed in different quantities, from a wine-glassful to a pint, according to circumstances, in disorders of the bowels and stomach, to stop internal bleedings, and other immoderate discharges of blood or by stool: it is also said to be useful in gleet and other weaknesses, and to have been administered with success in early stages of consumptions.

It is also recommended to wash old sores, and acrid eruptions on the skin; but this application of the water should always be accompanied with the internal use of it.

KINCARDINE.

This spring also rises in the county of Mearns, and is a chalybeate water, nearly resembling that of Glendy.

MOFFAT, Annandale.

The two springs of this place differ only in the strength of the waters; they are both impregnated with sulphur, which renders them nauseous to the taste and offensive to the smell; that which flows from the lower well is generally taken internally, the water of the upper spring is used for lotions, fomentations, and bathing.

It is prescribed for the scurvy, king's evil, and disorders of the skin; for habitual obstructions; for the *fluor albus*, and other female weaknesses which prevent conception; and for complaints in the stomach and bowels.

The quantity must be ascertained by the circumstances of the patient's constitution and the disease; in ordinary cases, two or three quarts a day are directed to be taken before breakfast, in different draughts, and at proper intervals, so as not to offend the stomach.

But it is always right to cleanse the first passages, previous to a course of these waters, by gentle purges, and even emetics, if required; and if the water, which generally acts diuretically, though it sometimes purges, should remain long in the body without passing off, it may be proper to dissolve a small quantity of purging salts now and then in a glass of it; and should that prove ineffectual, moderate bleeding may be beneficial.

Warmed to the heat of milk, it is prescribed as a lotion for washing old sores and ulcers, arising either from scrophulous or scorbutic disorders; and these wounds may either be dressed with linen rags dipped in the warm water, or, if practicable, the diseased limb may be bathed in it. The steam of it, properly directed, has been of use in old contractions and stiffnesses of the joints: it must be used internally as well as externally, in the last-mentioned cases.

PETERHEAD.

This water is chalybeate, of the same nature as that of the Glendy spring, but much stronger; it is in high reputation.

C H A P. IV.

Of the Spas and Medicinal Waters of Ireland.

THIS kingdom is plentifully supplied with wells and springs of water, differing in quality, but each efficacious in removing or relieving the disorders of the human body, as will appear from the following account of them.

AGHALOO, or APHALOO.

This water is impregnated with the fossil alkali, with sulphur, and a small quantity of purging salt, and is prescribed for the scurvy, king's evil, and diseases of the skin.

ANADUFF, County of Leitrim.

The water of this spring is impregnated with sulphur, and is much of the same kind with the last described, but weaker.

ASHWOOD, County of Fermanagh.

This spring also resembles the above, containing the fossil alkali, sulphur, and a small quantity of purging salt.

ATHLONE, County of Roscommon.

This is a weak chalybeate water, devoid of colour, smell, or particular taste; it operates gently by stool, but principally by urine; and is recommended in bilious colics, in other disorders of the stomach and bowels, and to remove obstructions.

BALLYCASTLE, County of Antrim,

Is also a chalybeate water; it has an offensive smell, but in other respects seems analogous to the waters of the same nature in the neighbourhood of London.

BALLYNAHINCH, County of Down.

This is a transparent chalybeate water,

cold, and impregnated with sulphur; and is prescribed in disorders of the skin, scurvy, king's evil, want of appetite, and disorders of the stomach.

BALLYSPELLAN, near Kilkenny.

This water is also chalybeate, and resembles in description and virtues those in the neighbourhood of London.

CARRICKFERGUS, County of Antrim.

This water is weakly purgative, very soft to the taste at the spring-head, and of a blue cast in colour; the quantity of two or three quarts are required to produce any effect.

CARRICKMORE.

This spring rises near Belturbet, in the county of Cavan, and the water has the soft milky taste of Bristol water, and will not bear keeping; it curdles with soap, and drops a white sediment, on having a small quantity of salt of tartar thrown into it. It contains an alkaline, and a portion of purging salt.

It is esteemed for removing glandular obstructions, and is recommended in disorders of the stomach arising from acidities, in immoderate fluxes, and other relaxations.

CASHMORE, County of Waterford,

Resembles in virtues the Cross Town water, hereafter described, though it is somewhat stronger.

CASTLE CONNEL, County of Limerick.

This water, which is chalybeate, is recommended in the same cases in which the German

German Spa waters are prescribed; it is at present in good reputation.

CASTLEMAIGN, County of Kerry.

This is a strong chalybeate water, impregnated also with sulphur, and resembles in virtue, that of the Aghaloo spring.

COOLAUAN, County of Fermanagh.

A chalybeate water, resembling that of Islington and others in the neighbourhood of London.

CROSS TOWN, near Waterford,

Is a vitriolic water, acting on some by purging, and on others emetically, but most commonly by urine.

It appears to contain a greater quantity of acid at some times than at others, and is recommended for internal bleedings, immoderate fluxes of all kinds, and in particular those of blood, complaints of the bowels and stomach, and consumptions: the dose is from a wine-glassful to a quart, according to circumstances. Externally used, it is said to cleanse the skin from sores, tetters, and other eruptions, but it must be taken internally at the same time.

DERINDAFF, County of Cavan.

This water is impregnated with sulphur and a purging salt.

It is given in scorbutic and scrophulous cases; scabs, leprosy, and complaints of the like kind; it is also said to be efficacious in the removal of chronic obstructions, and the destruction of worms.

DERRYHENCE, or DERRYINCH, County of Fermanagh.

This water contains sulphur and the fossil alkali, and possesses nearly the same virtues as the water of Aghaloo.

DERRYLESTER, County of Cavan.

This water resembles also the last-mentioned, but is stronger.

DRUMASNAVE, or MOUNT CAMPELL, County of Leitrim.

The water of this spring changes metals more quickly than any other in Ireland, and must therefore contain the greatest quantity of sulphur.

It is perfectly transparent and colourless in common, but turns white on the approach of rain; it contains besides sulphur a portion of the fossil alkali, and a small quantity of purging salt: its chief operation is by urine, though it purges some constitutions; and is said to produce in others a very contrary effect. It is recommended in the scurvy and king's evil; for diseases of the skin, and worms.

DRUMGOON, County of Fermanagh.

This water is also strongly impregnated with sulphur, as is apparent from its smell; it changes silver to a copper colour in a few minutes; a black sediment or mud is found at the bottom of the well. Being nearly of the same description and virtues as the Drumasnave water, it is advised in the same cases.

In this neighbourhood are also two other springs, the waters of both which contain sulphur; one of them resembles in most respects the Drumgoon water; the other acts more briskly as a purge.

DUBLIN SALT SPRINGS.

These springs are six in number; five in Francis Street, and one in Thomas's Court.

The waters of all these springs are more or less salt, and possess nearly the virtues of sea water; as a purge, the quantity of several pints will be required; they operate without griping, or other sensations of pain or uneasiness.

GALWAY.

This water is chalybeate, and resembles that of Tunbridge, in England.

GLANMILE,

GLANMILE, near Naul.

A chalybeate water, resembling those of the chalybeate springs near London.

GRANSHAW, near Dunnaghadee, County of Down.

This water is also chalybeate, and resembles that of the Castle Connel spring.

KANTURK, County of Cork.

A chalybeate water, of the nature of those in the neighbourhood of London.

KILBREW, County of Meath.

This water is also chalybeate, but strongly impregnated with vitriol, and resembles in description and virtues that of Cross Town, already mentioned; but as it is much stronger, great caution is necessary in the use of it, and it is always adviseable to begin with a small quantity, and increase the dose by degrees.

KILROOT, County of Antrim.

This is a weak salt water, resembling sea water; a large quantity of it is required for a purge.

KILLINGSHANVALLY, County of Fermanagh.

Is a chalybeate water, acting as a purge and diuretically; it is recommended in scrophulous and scorbutic cases, eruptions on the skin, and obstructions.

KILLASHER, County of Fermanagh.

This water is strongly impregnated with sulphur, and possesses nearly the virtues of the Aghaloo water.

LISBEAK, in the same Parish with the Killasher Spring.

At this place are two springs, both highly fulphureous, and possessing the virtues of the waters last described.

LISDONEVARNA, County of Clare.

This water is manifestly chalybeate, both

to the taste and smell; it also contains a portion of the fossil alkali; its virtue may be preserved, if it is carefully bottled and well corked: its usual operations are at first purging and vomiting; after a course of it has been continued, it acts diuretically. It is recommended in disorders of the stomach and bowels, in relaxations, and hysterics.

MACROOM, about sixteen miles from Cork.

A chalybeate water, resembling the last-mentioned.

MAHEREBEG, near Branden Bay, County of Kerry.

This water is salt, and resembles sea water in operation and virtues; from a pint to a quart is required to purge.

MALLOW, near Cork.

A warm water perfectly transparent, and agreeable to the taste; it keeps in bottles well corked, without losing its virtues, which are said to resemble those of the Bristol water.

MECHAN, County of Fermanagh.

Here are two springs, the waters of both which are impregnated with sulphur, and possess nearly the same virtues as those of Drumgoon.

MOUNT PALLAS, County of Cavan.

This water is chalybeate, and seems to be nearly similar to the Hartlepool waters in England.

NOBBER, County of Meath.

This water is impregnated with vitriol, and resembles that of Cross Town.

OWEN BREUN, County of Cavan.

The water of this spring contains sulphur, a purging salt, and a small portion of native alkali; it is recommended in scrophulous and

and scorbutic cafes, and disorders of the skin.

PETTIGOE, County of Donnegal.

This water is more strongly impregnated with sulphur than that of any other spring in Ireland, and contains also a purging salt; it's virtues are nearly those of the water last described.

ST. BARTHOLOMEW'S WELL, two Miles South West of Cork.

The water of this spring, which resembles the Tilbury water in England in description and virtues, is a chalybeate, but is soft, and does not curdle with soap; it putrifies if it is kept, when a foetid scum rises to the surface, which has a taste of iron; in this state, it changes the colour of silver, and galls give it a purple tinge, an effect which they do not produce in the fresh water.

SWADLINGBAR, County of Cavan.

This water smells strongly of sulphur, and retains the same smell in bottles, if they are well corked; it is generally limpid, and without colour, but sometimes appears troubled and whitish.

Like other sulphureous waters, it tinges silver of a black or copper-colour: a white or bluish scum generally covers the well; and a mud drops to the bottom, which burns on red-hot iron with a blue flame. It is impregnated with sea salt, and contains a fossil alkali and earth, and resembles in virtue the water of Drumgoon.

TOBER BONY.

The water of this spring, which rises within four miles of Dublin, is sweet, and does not curdle on being mingled with soap; when the weather is about to change, and particularly on the approach of wind or rain, it grows foetid: the sediment thrown on hot iron becomes foetid and black.

It contains a mixture of earth, alkaline salt, and an oily matter, or bitumen; it resembles in virtues the waters of St. Bartholomew's well.

THRALE, County of Kerry.

This water is chalybeate, of the description of the German spas, but less powerful; it resembles in composition and qualities the chalybeate water of Islington.

C H A P. V.

Of Medicinal Waters in Foreign Countries.

AIX-LA-CHAPELLE, Germany.

THE hot sulphureous waters and baths of this place have been long celebrated; they arise from several springs, from whence eight baths are supplied, in so many different parts of the town.

At the springs these waters are perfectly transparent, and have a strong smell of sul-

phur, resembling the explosion of gunpowder; but this smell goes off on their being exposed to the air: they are salt and bitter to the taste, and do not appear to be chalybeate; after they have passed some distance from the fountain, they seem to be so strongly alkaline, that they extract the dirt from linen without soap.

The heat of all these waters is upwards of 100 degrees of Fahrenheit's thermometer, and some of them very considerably more.

When they are first used, they are disagreeably harsh to the palate; but after the taste is familiarized to them, they become pleasing: when they are first taken internally, they frequently affect the head with giddiness, which also wears off by degrees.

They generally act by stool, without griping, or reducing the patient's strength; they also operate diuretically, and promote perspiration.

When they are taken as an alterative, the quantity necessary must be determined by the constitution, habit, and other circumstances; but it is always right to begin with a large wine-glassful or half a pint in the morning, and to increase the dose afterwards as may be found convenient. These waters should be drank at the springs, and large and repeated draughts are required to purge.

The situation and all other circumstances of the patient's case must be consulted, previous to bathing in these waters; and the season of the year, and degrees of heat of the bath, should likewise be considered: those which are moderately warm are in general to be preferred, though in some cases the hotter ones are more proper; but even in these, it is prudent to use the baths of moderate heat first, and increase it gradually.

Taken internally, these waters are recommended in the great variety of diseases which proceed from indigestion, or a foul stomach and bowels, in rheumatisms, in scorbutic and scrophulous cases, and in disorders of the skin; they are also advised in hysteric and hypochondriac disorders, in weak and debilitated nervous habits, in melancholy, in the gravel and stone, in the palsy, in those numerous ills which attend the injudicious use of mercury, and in a vast variety of other cases.

They are, however, to be avoided in hectic cases accompanied with heat and

fever, in all putrid disorders, and in every instance where the blood appears to be dissolved, or the constitution is much broken down.

BADEN, in Austria, Germany.

The waters of this spring are warm and impregnated with sulphur, and are particularly advised for gun-shot wounds, and complaints which remain in consequence of them.

BADEN-BADEN, in Swabia, Germany.

At and near this place are a number of hot springs and baths, the waters of which are all impregnated with sulphur. Taken internally, they purge gently, and are prescribed in the same cases as those of Aix-la-Chapelle.

BALARUC, in Langadoz, France.

These waters are salt and warm, and act as gentle laxatives. They are used in those disorders, for which salt purging waters are usually prescribed.

Being hot, they are thought serviceable in cases where warm baths are advisable, to assist the operation of internal draughts of such waters, and particularly in palsies and rheumatisms, and in scrophulous disorders.

BAGNIERS, in the Bigorre, France.

Here also are a variety of warm springs, some of which taken internally act diuretically, and others purge: their virtues are nearly those of the waters of Aix-la-chapelle.

BAREEGS, in the Bigorre, France.

At this place, several springs of hot water rise, all impregnated with sulphur, which form four baths.

The waters of these springs, are at first clear; but being suffered to stand, throw up a thin scum, resembling a pure oil. This scum has a slight smell of sulphur, or like that

that of hard eggs; it's taste is soft, but somewhat nauseous, and it is smooth to the touch as soapy water or oil; it should be drank at the fountain-head, as the volatile parts are lost by it's being exposed to the air.

It promotes perspiration and urine, but does not often purge; the dose must be proportioned to circumstances, but a quart or three pints is generally sufficient.

The waters of these springs have been prescribed internally in scorbutic, scrophulous, rheumatic, and paralytic cases; in convulsions, and remains of the gout.

Externally, they are recommended as a bath or fomentation, in wounds, ulcers, stiffnesses, contractions, and hard tumors: in old gun-shot wounds, they are said to give great relief, and in hard knobs in the urethra occasioned by venereal taints.

BORSET, near Aix-la-Chapelle.

These waters resemble those of Aix-la-Chapelle, but are not used internally; externally, they are recommended for the same diseases as the water of Baresges, and they are also said to be useful in dropsies.

BRABACK, in the County of Nassau, Germany.

This is a chalybeate water, sparkling, light, and spirituous; it may be kept in bottles well corked, but it soon loses it's virtues on exposure to the open air. It is salt and astringent to the taste, and is sensibly impregnated with sulphur.

It's virtues are nearly those of the German Spas.

BRANDOLA, in Italy,

Is also a light chalybeate water, perfectly transparent; it is impregnated with sulphur and an alkaline salt, and is somewhat acid to the taste: drank in large quantities, which must be proportioned to the patient's situation and constitution, it is a gentle purgative; but acts chiefly as a diuretic and perspirative, and is recommended in the

same complaints, as the Islington and German Spas.

BUCH, near the Caroline Baths, in Bohemia.

These waters are brisk and pungent to the taste; but, being impregnated with great quantities of fixed air, they become insipid when they have been some time exposed to the air. They are recommended in the same cases as the Tilbury and Seltzer waters, containing, like them, a portion of alkaline salt, but in a less degree.

CAROLINE BATHS, at Carlsbad, in Bohemia.

These waters, which are hot, and contain a fossil alkali; are prescribed externally and internally in female and glandular obstructions, in general relaxations of the system, and in those disorders which are occasioned by an obstructed circulation: they are said to be so inoffensive, that they may be used with safety in all cases, and at all times.

CHAUDE FONTAINE, near Leige, Germany.

Here are several hot springs which supply a great number of baths.

These waters, which are not chalybeate, are impregnated with a fossil alkali and fixed air, and may be used externally instead of the waters of Aix-la-Chapelle or Bath.

CLEVES, Germany.

This is a lively, sparkling, chalybeate water, acts chiefly by urine, and resembles the Pyrmont water.

DAS WILD-BAD, Nuremberg, Germany.

A chalybeate, somewhat astringent to the taste, and impregnated with saline particles.

In obstructions of the intestines, and particularly in female cases, it is said to be peculiarly serviceable.

D'Ar

D'AX EN FOIX, fifteen Leagues West of Thoulouze, France.

Here are a variety of warm springs of different degrees of heat; they are recommended externally and internally for the same disorders as the waters of Aix-la-Chapelle and Bareges.

EGRA, Bohemia.

A brisk and spirituous chalybeate water, acting as a purgative and diuretic, and which seems of a nature somewhat similar to the Cheltenham waters in England.

FRANCKFORT ON THE MAINE, Germany.

In this neighbourhood are two springs, one of which is called Faulpump, the other Fons Scabioforum: they are both strongly impregnated with sulphur, with a mixture of sea salt, and are recommended in scorbutic and scrophulous cases, and eruptions of the skin, to destroy worms, and to remove obstructions.

JAMAICA, in the West Indies.

In this island are several warm springs, the waters of which may probably be found of the same nature, and possessing the same virtues, as those of Bath, Bareges, or Aix-la-Chapelle.

KORYTNA, near Hunnobra, in Germany.

This spring rises on the summit of a rock which is extremely difficult of ascent, and is surrounded by a thick wood. The water is offensive to the taste and smell, is of a black colour, and deposits a considerable quantity of mud at the bottom of the well. It is strongly impregnated with sulphur, and advised in those cases where sulphureous waters are thought serviceable.

KUKA, near the Town of Jarowitz, in Bohemia.

The water of this spring, which is a lively sparkling chalybeate, contains a large quantity of fixed air, and the fossil alkali. It is rather agreeable to the taste, and the

smell is so pungent as to affect the whole head; when it is heated to a certain degree, it emits a penetrating vapour, highly sulphureous to the smell. It insensibly promotes perspiration; and in some instances expectoration, and acts diuretically. It is prescribed in the same cases as the German Spa waters.

MOUNT D'OR, seven Leagues from Clermont, in the Auvergne, France.

The water of this spring is nearly of the warmth of the most temperate of those at Aix-la-Chapelle, and possesses nearly the same qualities. Internally taken, it operates by urine, and sometimes by stool; as a bath, it sweats profusely, without reducing the patient's strength.

It is prescribed in paralytic, gouty, rheumatic, and other chronic cases.

NEVIS, West Indies.

In this island are several warm springs, resembling those of Jamaica.

NEZDENICE, Germany, near Hunnobra, in the District of the Castle of Banow.

This water is vinous to the taste, and contains much fixed air.

It operates by urine, and is recommended in the gravel, stone, disorders of the kidneys and bladder, gout, rheumatism, and other chronic complaints.

PASSY, near Paris,

Is a chalybeate water perfectly clear, somewhat acid to the taste, and smelling of the iron: it throws up a considerable quantity of air-bubbles.

A very large quantity is necessary, if it is required to purge, it's principal operation being by urine. It resembles the Pyrmont water.

PLOMBIERS, in Lorraine.

This water is moderately warm, soft to the touch, and salt to the taste.

It

It is advifed for acidities in the ftomach, in internal hæmorrhages, phthific and afthma, dropfies, diabetes, the dyfentery, and whites, and in diforders of the fkin. From one pint to fix, according to circumftances, muft be taken on an empty ftomach in the morning; it acts as a purgative and diuretic.

Externally, it is efteemed an excellent lotion for wafhing old ulcers.

PONTGIBAULT, in the Auvergne, France.

The Water of this fpring, is perfectly transparent.

It contains the native alkali, and is vinous to the tafte. It acts by urine, and purges gently; it's virtues are nearly thofe of the Tilbury water in England.

PYRMONT, in Weftphalia, Germany.

Thefe wells are in the country of Pyrmont, between a caftle of that name and the town of Oeftorff; this water is very ftroingly chalybeate, transparent as chryftal, and fparkles like Champagne when it is firft taken up from the fountain, though this appearance is more or lefs obfervable, as the glafs is plunged into the refervoir with greater or lefs violence: it is pungent, fharp, refrefhing, and pleafant to the palate; but the fmell is fomewhat fulphureous, and a fubtile vapour of the fame kind rifes from the wells, and affects thofe who ferve the water with giddinefs; and this effect is moft perceivable when the water in the wells is nearly exhausted.

Thofe who drink it at the well, feel the fame kind of dizzinefs like intoxication; which may be attributed to the great quantity of fixed air with which this water is impregnated.

Though this water is transparent, it has fomewhat of a milky hue, which increafes after expofure, and afterwards changes into reddifh muddy clouds, by which the particles of fteel are feparated, and rife to the furface in a fhining glittering fcum.

It acts as a purgative, if taken in large quantities, though fome purging falt is ufually added to procure this effect; the ordinary operation being as a diuretic and fudorific, though in fome conftitutions it is faid to raife a fpitting, and difcharge the foul humours that way.

It is impoffible to prefcribe the exact quantity neceffary, which muft depend on circumftances; but as long as it agrees with the ftomach it will not prove hurtful, and in fome cafes it relieves even by exciting vomiting.

It is faid to correct the faline bitter and fharp humours of the ftomach and bowels, to reftore the appetite, and affift digeftion: it is alfo recommended in the heart-burn, the green ficknefs, female obftructions, and to relieve barrennefs; in fcorbutic difeafes, and thofe of the fkin; in relaxed and broken conftitutions; and mixed with milk, it is alfo prefcribed in colics and dyfenteries, in apoplexies, epilepfies, and other diforders of the head, and in thofe which affect the breaft and lungs, in which latter cafes it is advifed to be taken lukewarm; in nervous, hyfteric, hypochondriac, and paralytic complaints; in the gravel and urinary obftructions, in foulnefs of the blood, and in obftructions of the more minute veffels. It is faid to correct the texture of the blood when it is in a lax ftate; and to heighten the fpirits, without producing the difagreeable inflammatory effects which follow the ufe of a fufficient quantity of wine to answer this purpofe.

Though thefe waters bear keeping and carrying to a diftance, yet as they lofe part of their chalybeate quality, a larger quantity will be neceffary when they are taken remote from the fpring, than when they are drank at the fountain-head.

Little preparation is neceffary to the drinking thefe waters; if, however, the ftomach and bowels appear to be fo loaded that their operation is retarded, gentle purges may be proper.

The length of time necessary for a course of these waters, can only be determined by the nature of the disorder, and the age, habit, and constitution of the patient; in some instances, ten or twelve days use of them will bring the desired relief; in others, as many weeks will be required to effect the intended purpose. But it is adviseable always to begin with small quantities, and to increase by degrees to the largest necessary; and it has been recommended that the course should commence in the month of May, and after a few days be discontinued, and resumed again in the beginning of July, and pursued through that and the next month, or so much of them as shall be found necessary.

But it may be right to remark, that those who have received benefit from the use of these waters, can hardly discontinue them wholly with safety; the disorders for which they were originally prescribed are apt to return, if annual application is not made to the waters, so that they seem rather to effect a temporary than a permanent cure; yet the constitution does not appear to suffer the least injury from the frequent repetition of them, numbers having persisted in them annually for many years, even to old age, with constant advantage.

The length of the course may also be in some measure ascertained by the effect they produce on the patient's stomach; whenever they nauseate, or become disagreeable, it will be right to discontinue the use of them.

Some regimen is also necessary; gentle exercise promotes the operation of the waters, and should always be taken even between each glass; but the motion should by no means be so violent as to produce profuse perspiration, and especially before the water has operated.

It is advised to take the waters at least an hour or two before breakfast; those who can abstain from that meal, and take an early dinner, will perhaps find it most salutary.

As to diet, moderation in eating and drinking is the principal rule to be attended to; whenever the human body is disordered, and whatever be the disease, abstemiousness in a certain degree will always contribute to it's restoration. Good bread, light animal food, and wholesome vegetables for dinner, and a supper of milk or other spoon-meat, will be found the best regulated food; and the less wine the patient indulges in, the sooner he may expect a cure: at any rate, every species of excess must be avoided, or the waters of Pyrmont will be drank to very little purpose.

If these waters should occasion a retention of urine, or produce drowsiness, giddiness, restless nights, cramps, or other disagreeable symptoms of the like kind, it will be right to try a purge or two; but if these should prove ineffectual to remove the complaints, it will not be prudent to persevere in the use of the waters.

SCOLLIENSES, in Upper Rhoetia, Switzerland.

This water is chalybeate, and contains a portion of the fossil alkali, and such a quantity of fixed air as to endanger the bottles in which it is kept.

It operates briskly, but not severely, by stool, and promotes expectoration.

It is recommended in colic pains, and most other disorders in which the spa water is prescribed.

SEDLITZ, Bohemia.

This is a purging water, resembling that of Epsom in England, but so much stronger, that two or three tea-cupfuls are generally sufficient for most constitutions, and a pint for the strongest.

SELTZER, in Germany.

This spring rises near the town of Neider, or Lower Seltzer, about three leagues from Franckfort on the Maine, in an open, fertile, and pleasant country.

The

The water bursts from the earth with great violence, is perfectly bright and colourless, and throws up a considerable number of air-vessels when it is poured from one vessel to another.

It's taste on the palate is an agreeable pungent acid, but it leaves an acrid one on the tongue after it is swallowed.

Exposed to the air for any considerable time, it assumes the taste of a vapid alkaline ley, but drops no sediment, and is foetid and highly offensive to the smell.

It effervesces with acids, and especially with Rhenish wines or sugar, whilst it is fresh; but ceases to produce that effect after it has stood some time: and though it does not appear to contain any chalybeate, it curdles with soap.

It is impregnated with an alkaline salt, a portion of sea salt, and a quantity of fixed air.

It does not purge, but operates chiefly by urine, in correcting acidities in the stomach, and relieving the heart-burn; it promotes the circulation of the blood, by rendering the juices more fluid, and is therefore prescribed in glandular obstructions, and to carry off gross and viscid humours.

In the gravel and stone, and other disorders of the kidneys and bladder, it is said to be peculiarly efficacious; and to have been administered with success, mixed with milk, in gouty and rheumatic complaints; and alone, in the scurvy, king's evil, eruptions on the skin, and those disorders which are occasioned by a dissolved or broken state of the blood. The dose must be proportioned to the case, but several pints of it may be drank in the course of the day with the utmost safety.

As a diuretic, it is recommended in drop-fies; and with equal quantities of asses milk, in consumptive cases, and other disorders of the lungs.

In nervous disorders, it may be given either with or without milk, as may be most suitable to the constitution; as well as in

hypochondriac and hysterical disorders, and in female obstructions; in the latter case exercise is necessary.

Fluxes, and violent discharges occasioned by acidities in the bowels, are also checked by this water; it corrects the milk of nurses, and renders it more wholesome and nourishing, and prevents it from turning sour on the infants stomachs.

Though it bears keeping and carriage tolerably, yet, as some of the fixed air will be lost, it is most efficacious when it is drank at the source.

If the water disagrees with the stomach, a small portion of some generous wine, or a still smaller of good rum, may be added to it, in cases where these mixtures will not be prejudicial.

SEYDSCHUTZ, in Germany.

This spring is near that of Sedlitz, and is also of a purgative quality, but possesses more power.

SPA, in Germany.

The town of Spa is situated in the district of Leige, six leagues east from that capital; it was formerly a small village, but has many years since been enlarged to a town by the inhabitants, who found themselves obliged to increase the buildings, for the conveniency of lodging the great number of strangers resorting thither for the benefit of the waters.

Most of the houses are built in the form of a crescent, the outside middle facing the south, and having a view of the east and west and the whole town is sheltered from the north by a high mountain, which extends itself beyond the length of the town.

The country around is for the most part heath, woods, and mountains, abounding with springs, both of mineral and common water, descending in rivulets, and watering the meadows and cultivated grounds, which produce no wheat, but a great quantity of spelt.

spelt and oats, a very small proportion of rye, and some flax.

The general face of the country is rough, stoney, and full of barren mountains, yielding little else than heath and wood, and producing a wild but romantic prospect. Those who come to Spa for a remedy for their diseases, must not expect to find a fine Champagne country, with the fruits and flowers of Italy; but those who delight in hunting and shooting, will not be at a loss for amusement, as the country abounds with wild boars, deer, hares, heath-cocks, woodcocks, partridges, and most other kinds of game.

There are medicinal herbs to be found upon the most barren of the adjacent mountains, and in particular wild thyme in great abundance, which is excellent feeding for sheep, and is the reason why the mutton of this country (though small) is preferable to most other animal food. The rivulets that descend from the mountains, are full of trouts, gudgeons, loaches, and craw-fish, which are sold at a very reasonable price.

In this town and in the neighbourhood are several springs of excellent chalybeate waters, greater quantities of which are imported into Great Britain, than of any foreign mineral waters.

The principal springs were formerly confined to the five first hereafter mentioned; but many others have been since discovered, as will appear from the subsequent account.

1. The Pohoun, or Pouxon, which rises in the middle of the town.

2. The Geronsterre, three quarters of a league south-west of the town.

3. Sauvenierre, a league south east from it, and Grosbeck, which rising close to the Sauvenierre, was formerly included in the same description.

4. Wartroz, a quarter of a league to the east of Sauvenierre, and half a league from Spa.

5. Tonnelet, a little distance from the Wartroz, on the ascent of the hill.

These were the only springs which were celebrated, till within the last forty or fifty years, since which time the following have been added.

Sarts, or Niveset, in the district of the former name; Chevron, or Bru, in the principality of Stavelot; Beverse, Couve, Geromont, and Sige, all near Malmdy.

The water of the Pohoun, which is a flow deep spring, contains a great quantity of fixed air, some fossil alkali, and a portion of earthy matter.

When the weather is dry, and the air cold, and it is in it's perfect undisturbed state, this water is transparent, free from colour or smell, and of an acid, vinous, and agreeable taste; gently taken out of the well, it does not sparkle or fly, but the inside of the glass appears covered with small air-bubbles; on being poured from one vessel to another, it sparkles and throws up large quantities of these bubbles to the surface.

When the weather is particularly warm, and on the approach of rain, the transparency of this water abates considerably, and it is apt to be disturbed, and to assume an appearance like whey: in such changes of the weather, it also seems to be less impregnated with fixed air, and to lose in some measure it's chalybeate qualities. Previous to such alterations, those who attend this well to fill the water, pretend to hear a rumbling noise or kind of murmur in it, which may be occasioned by the change which is then taking place.

If it is well corked, it bears carriage and keeping better than almost any mineral water; but it should not be left exposed to the air, as the fixed air which it contains in greater quantities than most other waters of the like kind, will soon evaporate; it is this abundance of fixed air which gives this water it's briskness and agreeable
vinous

vinous taste; and it is from the same cause that it boils with a very inconsiderable heat, and dissolves additional iron immersed in it.

Acids mingled with it disengage the fixed air, and occasion effervescence; but hot or cold it mixes with milk without curdling.

The Geronsterre has a smell of sulphur at the fountain, in which respect only it is different from the water of the Pouhon spring; like which it has a vinous chalybeate taste, and is brisk and spirituous: the sulphureous smell, which is most perceivable in wet weather, vanishes entirely if the water is taken to any distance from the well.

It acts like the Pyrmont water upon some who drink from this spring, affecting the head with a giddiness similar to that which is occasioned by inebriety; but this does not continue above twenty minutes or half an hour, and in some cases much less.

This water is peculiarly cold, and though it does not appear to be impregnated with so great a quantity of fixed air as that of some of the other springs, it bears carriage altogether as well as any.

The Sauvenierre water differs little from the Pouhon, only that it seems to contain a greater quantity of acid, and at the fountain has a slight sulphureous smell.

Behind and within the same well which encompasses the Sauvenierre spring is another, to which the name of Grosbeck is given, the water of which resembles that of the Pouhon, in all other respects, except that of being rather more vinous and somewhat vitriolic to the taste, and smelling slightly of sulphur.

The Wartroz spring rises from a lower ground than any of the others, and is therefore subject to have its waters foul; but there does not seem to be any foundation for the apprehension of their being purgative; on the contrary, when they are transparent, and the well in good order, they are nearly of the same nature as those of the Pouhon. This spring, as well as

the Tonnelet, has been for some years neglected.

Notwithstanding the Tonnelet spring is not at present in high reputation, it has once not only been compared to the Pouhon, but was actually thought to excel it in brightness, transparency, and sprightliness: it is totally void of colour and smell; and, rushing rapidly from its source, does not foul the basin which receives it; its taste is so lively and vinous as to resemble in some degree Champagne wine.

It has been determined, by experiment, that this water contains more fixed air than either of those already mentioned; yet this spring, as we have already observed, is very unaccountably neglected.

Among the other springs of more modern discovery, the Sarts or Nivelet, is in quality and virtues similar to the Tonnelet, but more unpleasantly acid and astringent to the taste, and less spirituous.

The spring of Bru, or Chevron, not being situated in the bishoprick of Leige, is but little favoured by the medical practitioners of that city; yet it does not appear to be deficient in any of the virtues which are attributed to the other Spa waters.

The Couve and Beverse are also analogous to the Tonnelet waters, and are in general to be preferred to those of the Wartroz spring; the Beverse water is said to lose its virtues by keeping more in proportion than that of Couve.

The La Sige water appears to have little or no chalybeate qualities, at least they are not perceivable to the taste, which is agreeable, lively, and somewhat vinous, yet it sparkles when it is thrown out of a bottle or poured from one vessel to another; after being some time exposed to the air, a scum rises to the surface, shaded with various colours, which seems to be occasioned by its containing more earthy matter and less fixed air than the waters of the other springs.

The Geromont spring differs only from the last-mentioned, in being impregnated with fossil alkali and a small portion of sea salt.

Upon the whole, it will appear that the waters of all the various springs possess nearly the same qualities, differing only in the degrees of them, and that their virtues generally depend on their lightness and purity, and the quantity of fixed air contained in them; the active operation of which may probably be enforced by the particles of iron and salt with which most of them abound, and of which they all partake in a greater or lesser proportion.

The operation of the Spa waters is most commonly by urine, though they sometimes act as purgatives, and in that case produce the effect of changing the colour of the stools in the same manner as other chalybeate waters; and, like them, have also a surprizing effect on the spirits, procuring a constant and equal flow: they act principally on the fibres, which they brace and strengthen; and they are also cooling, refreshing, and invigorating.

They are recommended in an infinite variety of chronic disorders, and particularly in all cases where the stomach and fibres being relaxed, or the constitution having been broken down by excesses or diseases, a general weakness, languor, dejection, or tendency to wasting has been the consequence.

These waters have also proved highly serviceable in all kinds of nervous disorders, especially where they affect gross and phlegmatic habits; in such obstinate coughs and asthmatic complaints as are occasioned by relaxation of the pulmonary vessels; in hysteric and hypochondriac complaints; in obstructions of the intestines, such as the liver, spleen, or other viscera; in all cases where the blood is in a broken, dissolved, or putrescent state, from irregular living, from scorbutic eruptions

imprudently repelled, or from disorders of a putrid tendency.

They are prescribed in all cases where the fibres are either too much relaxed, and inclining to introduce a general debility, or so irritable as to threaten inflammation; in palsies and epilepsies, in all fluxes and preternatural discharges, and particularly the *fluor albus* or whites, and gleet in both sexes; in the gravel, stone, obstruction of urine; and in such other cases as require stimulating and active medicines; and they are said to assist in relieving barrenness.

But they are forbid, without proper previous evacuations, in all cases of violent feverish heat, and in hot and sanguine constitutions, and such as are affected with a redundancy of bile; in all ulcerations of the intestinal parts, and in particular of the lungs, or wherever the matter cannot be discharged; and in all such obstructions as are accompanied with any considerable degree of fever.

As the quantity of the dose must in all cases depend on circumstances, all directions on this subject are useless: but the patient himself will be the best judge; and the more he can get down without feeling the inconveniences of sickness or weight at the stomach, the better chance he will have of speedy relief. It is adviseable to begin with a small dose of a wine-glass or two, twice or thrice in a forenoon, and to augment it by degrees to as much as will pass off with ease, without producing any of the disagreeable symptoms already mentioned. When this point is attained, the course should be persisted in till relief is obtained, or all hope of it is vanished; and in the former case, the water should be discontinued in the same gradual way. In whatever quantities the patient's stomach will admit the water to be taken, moderate exercise should accompany the course; and if it should in the first instance prove cold to the stomach, it may be warmed by placing the

the glass a minute or two in hot water, or by adding as much hot common water as will take off the chilliness of the Spa water; or a few warm or aromatic seeds may be taken after it, till the stomach is reconciled to the use of it.

During the course, a cooling regimen is recommended; all excesses, whether in eating, drinking, exercise, or indulgence of the passions, is to be avoided; the food should be plain, and the animal flesh such as is light and easy of digestion.

As a preparation, gentle purgatives are prescribed; and if the stomach appears to be particularly loaded with phlegm, a small dose or two of ipecacuanha may be useful as an emetic. If the water should produce costiveness, the body should be kept open by a little Rochelle salt, or rhubarb, taken now and then in the first morning draught of it.

Where these waters are directed to be used in cases of too great rigidity of the solids, warm bathing is recommended as a previous measure; and the springs of Aix-la-Chapelle being in the neighbourhood, are usually resorted to on these occasions. When the complaint, on the contrary, is apprehended to proceed from too great a relaxation of the fibres, the cold bath is advised.

The waters of these springs are also applied externally in many different cases; they have been used with success as an injection in female weaknesses, such disorders as produce ulcers in the womb, and even in recent venereal diseases; as a lotion for old and offensive ulcers, and as a gargle for venereal eruptions and ulcers in the mouth, for relaxations in the tonsils of the throat, and to fasten loose teeth. Taken internally, and used as a bath at the same time, they are said to cure the itch, and other eruptions on the skin.

In the application of these waters, regard should be had to their different degrees of strength, as they have been already de-

scribed, and they may by this means be suited to the various diseases for which they are prescribed, or to different degrees of the same. Some little variation in the qualities of these waters will point out which of them are to be preferred in one case, and which in another.

SUEHALOZA, near Hungarian-Broda, Germany.

This water resembles in taste, composition and virtues, those of Seltzer and Pyrmont: it is taken by way of common drink; and in this manner of administering it is said to be serviceable in scorbutic and scrophulous cases, and in foulnesses of the skin.

TONSTEIN, Electorate of Cologne, Germany.

The water of this spring is highly celebrated for its virtues in those cases for which that of Seltzer has been recommended: it is impregnated with an alkaline salt, sea salt, and a small portion of chalk or chalky earth, and has a lively vinous taste whilst it is fresh, which is lost after it has been kept or exposed to the air. When first drawn from the fountain, it is perfectly transparent; but being suffered to stand, the fixed air evaporates, and it becomes foul and cloudy.

This water is frequently used medicinally as a common drink, either alone, or mingled with wine: it operates by urine, and is said to be excellent in removing glandular and other obstructions; in the scurvy, king's evil, and leprosy; in the dropsy; and in the gravel, stone, and other urinary complaints; as also in excessive discharges arising from acids in the bowels, and in heart-burn and other disorders occasioned by acidities in the stomach.

VAHLS, in the Province of Dauphiny, France.

This water is very nearly of the taste, qualities, and virtues, of that last-described; it is commonly carried to Paris for use, but loses its vinous taste by keeping and carriage.

carriage, and becomes vapid and brackish. A spring of nearly the same water, but less powerful, rises in the same neighbourhood; this is called La Marie.

WILDUNGAN, Waldeck, Germany.

The water of this spring resembles in some measure that of Tilbury, but is so much weaker, that it is ineffectual to remove obstinate chronic disorders; but duly persisted in for a considerable length of time, and taken in large quantities, it is an

excellent preventive of gouty, rheumatic, or scorbutic complaints, and to carry off the remains of these disorders, and prevent the return of them.

ZAHOROVICE, near Nezdénice, Germany.

This water is rather acrid to the taste, and somewhat more salt, though less acid, than that of the Nezdénice spring: this water is also offensive to the smell.

It is recommended in scurvy, king's evil, leprosy, and other disorders of the skin.

CHAP. VI.

Of Sea-Water, and Bathing in the Sea.

THOUGH in treating of different disorders we have had frequent occasion to speak of the virtues and efficacy of *sea-water*, both taken internally as a medicine, and applied externally in bathing, or as a lotion or fomentation; yet we are of opinion that this noble medicine, so much more general in its use than is usually conceived, and so easily obtained in this island of Great Britain, deserves our very particular attention; more especially as in certain cases where purgatives are required, its operation in many particulars excels that of most other laxatives, and may actually be applied with safety where other medicines might be dangerous.

That vast collection of waters which we call Sea, surrounds the whole earth, and consequently washes whatever is contained between its opposite shores, such as marine plants growing beneath the surface of this fluid, or adhering to the rocks which are at certain times overflowed by it, salts, fishes, marine animals, minerals, and a thousand other substances with which the

bottom of the sea abounds, and is enriched with the particles which it receives from these bodies, and which are either washed off from them, or pass into the water by transpiration, and endeavouring to escape into the air, are intercepted by the water, and mingle with it: of these particles the chief part are, however, salts, which preserve the water from putrefaction, and give it a more oily and soapy quality than spring-water. To these component parts may also be added sulphur, which it receives from certain steams and effluvia, which constantly pass into this body of water.

These various causes conjoining seem to constitute that fluid which is called Sea, and which the all-wise Creator of all things seems to have designed to be a kind of universal common defence against the corruption and putrefaction of substances, and in particular of animal bodies; and in those climates where the sun's heat is more intense, and therefore more apt to corrupt fluids, the sea has been found by observation and experiments to be the most salt.

Nor

Nor is this wonderful collection of waters, thus preserved from corruption by the aid of salt, confined to the uses alone which we have already mentioned; it also performs the Almighty will, and serves his all-wise purposes in a variety of ways. The sun, which separates the fresh water from the salt, and gently attracts it upwards, causes also many sulphureous and nitrous particles to ascend in the same vapours, which being dispersed in the air and driven over every part of the globe, may be probably the cause of many if not all the various phænomena and changes of the air; and having performed this destined task, so salutary to mankind, the fluid itself falls to the ground in the shape either of dew, rain, hail, or snow, and refreshing the productions of the earth, affording water to all the animals which inhabit it, and augmenting the springs destined to the use of men, with a liquid of the purest quality, the superflux runs into the rivers, and thence into the sea, the common parent, where it becomes again impregnated with the same particles, and is ready to resume the same functions.

The principal qualities of sea-water are saltness, bitterness, nitrosity, and oiliness.

Of salt it has been computed, from the experiments of a most ingenious natural philosopher, that every gallon of sea-water contains five ounces and a half; so that besides the other parts abovementioned, every pint of sea-water has five drams and a half of salt; and therefore this quantity is generally sufficient to give three or four smart stools to a grown person of good constitution. This salt consists of a peculiar acid and a mineral alkali, but the acid part is so obstructed by the other that it can scarcely exert any power, and the salt is of so fixed a nature that it never yields to putrefaction, and preserves other bodies so remarkably that the same learned and laborious enquirer found that three drops of the spirit of sea-salt in an

ounce of water, would preserve flesh for a considerable time from putrefaction; and that, on immersing a piece of raw beef in sea-water, it's astringent power was so great that it contracted the minute blood-vessels, so that no blood would flow from it.

The quality of bitterness is supposed to be acquired from the bituminous parts of the adjoining earth; and it is probable that sulphureous exhalations are expelled by subterranean fires, and impregnate the sea-water in the same manner as the steams of sulphur are dispersed through wine; from whence also may arise a circumstance which has been often observed, that the deeper the water is taken the more bitter it is; perhaps these bituminous and sulphureous particles assist the salt in the dispersion of tumors, as physicians have always esteemed bitumen to be a dissolving medicine, composed of salt, sulphur, and a small portion of earth.

From the bitter salt and the oleous bitumen of the sea-water, the ingenious philosopher already quoted, is of opinion, the nitrosity of this water proceeds; and adds, that sea-water does not so readily extinguish fire as spring or other fresh water, which he attributes to the nitrous as well as the bituminous and sulphureous particles with which this water abounds.

The last quality ascribed to the sea-water is oiliness, and this has been proved by repeated experiments; in particular, it has been found that two pounds of sea-water will not dissolve as much salt as the like quantity of spring-water by half a dram, though their specific gravities are equal, which has been attributed to it's oiliness; and that sea-water, though deprived of it's salt, retains a certain viscid matter, which sticks to the side of the vessel if the water is disturbed, but sinks to the bottom if it is suffered to remain motionless. This oiliness is not discoverable in spring-water; and this quality appears also in sea-salt,

which being liquified in a moist air, lets fall it's earth with an oily, pungent, and astringent liquid.

The sea-water, used internally, acts according to the quantity taken: in small doses, it stimulates and heats, disperses and breaks the finer fluids, and produces thirst; in larger quantities it proves a most excellent purge, cleansing the body of all foul and malignant humours, without depriving it of strength or bringing on lassitude, languor, or dejection of spirits, effects which a repeated use of most other laxative medicines occasion in all cases; and it is for this reason that the use of the sea-water may be pursued, and it's operation kept up without injury, for so considerable a length of time, that obstinate and chronic diseases frequently yield to it, after all other remedies have been tried in vain.

The only preparation necessary to a course of the sea-water, is when there is a disposition to fever, heat, or inflammation, and in very full and sanguine habits; in any of those cases, purging and a cooling regimen will be proper, and in the latter bleeding, previous to the internal use of it.

It has been recommended and tried with success, in all glandular complaints, and even those which affecting the intestines or lungs, threaten a consumption; in obstructions of the spleen and liver, and those which occasion jaundice; in obstructions of the kidneys, when there is no inflammation, nor any stones too large to pass the urinary passages; in weakness of the stomach and loss of appetite, which it restores, and assists digestion.

It is of excellent use in carrying off gross humours, occasioned by excesses or irregularity of living, or by indulging in high food, and neglecting to use proper exercise; and it acts infallibly in scouring viscid mucus and worms from the intestines.

Externally used, infinite benefit is de-

rived from it in preventing and removing the deleterious effects of the bites of mad animals; in the rickets in the leprosy, both moist and dry; in the itch, in scorbutic complaints, and in particular such as produce blotches, scabs, or spots on the skin; in palsy, epilepsy, and convulsions: but in all these disorders the internal use of the sea-water must accompany the external application of it.

But the disease in which of all others, this invaluable remedy hath proved most effectual, is the scrophula, or king's evil: a disorder so obstinate as scarce ever to be subdued by the powers of any other medicines; so loathsome as to be universally dreaded; and so inveterate as to be generally understood to be hereditary, and to taint the blood from generation to generation, perpetuating to distant posterity the misfortunes of their ill-fated ancestors.

In treating of this disorder, we have pointed out the use of the sea-water, both as an internal medicine, and as a bath, in all the various appearances, and in every stage of it; and we shall only add here, that the earlier the application is made to this remedy, the probability of success will not only be the stronger, but the dangers of scars, carious bones, and loss of joints, will in all probability be averted. Should, however, these stumous tumors be unavoidably opened and become ulcers, the wounds may not only be dressed with the froth of the sea, as we have already advised, but the juice of the *quercus marina*, or common sea-weed, may be expressed and applied to the wounds.

But the best recommendation which can be given of sea-water in this otherwise invincible disease, will arise from the following Cases, which we have extracted from an infinite number, incontestibly proved by authorities undoubted and unquestionable; and we earnestly advise such of our readers as have either themselves the misfortune

tune to be afflicted with this disease, or to be connected in friendship or consanguinity with those who labour under it, to peruse these Cases with attention, because they may not only derive from them the comfortable prospect of cure in the most deplorable cases, but receive such directions for the use of this remedy as may in most instances be applied to advantage.

CASE I.

A Young lady of noble birth, just entering upon her seventeenth year, was troubled with hard swellings, continually rising near the breasts, under the ears, and in other parts of the neck, to such a degree, that she had no rest from the disease, nor any remission from taking physic.

In one place a knot would arise, grow, suppurate, and be healed with extreme difficulty; and this would be scarcely covered with skin before a new knot would rise in another place, and beginning to suppurate, afforded melancholy expectations of others to succeed.

When things were in this situation, and the disease had long exercised the patience of the unfortunate lady and her friends, and no relief could be obtained from calomel, mercury, præcipitate, and other mercurial medicines; when burnt sponge, coralline, wood-lice, lime-water, and a thousand other preparations had been tried, which, though they sometimes gave some little temporary relief, were of no use to disperse and effectually eradicate the disease. She was directed to be removed to the sea-side, ordered to bathe in the sea every morning, and to drink as much sea-water as would give two or three stools a day, and to wash the ulcers and the hardened glands frequently with the same water warm: by these methods, continued about two months, the ulcers were healed up, and some of the strumous knots entirely dispersed, and the

rest so softened that the patient recovered her former health, and returned to town; where, having thus experienced the salutary effects of this remedy, she was advised to continue the use of it, which she persevered in both internally and externally, and from that time remained entirely free from her old scrophulous disorder, or from any new attacks of it.

CASE II.

A Young lady of the first rank, about six years old, was troubled with a knotty scrophulous swelling upon her upper lip; the glands of her arm-pits were increased in bulk and grown hard; her belly was unequally swelled, with hard knots here and there, which did not yield to the touch: to this was joined a dry cough, without spitting; and some difficulty of breathing, especially at night.

These apparent strumous symptoms in the lip and the glands under the arm-pits, gave strong suspicion that the glands of the lungs and mesentery, were infected with the same taint, that they were swelled and grown hard, and that without timely assistance, there was danger of the formation of matter in these parts, which would produce a consumption of the lungs and an atrophy or wasting away of the flesh.

After bleeding, five spoonfuls of sea-water were administered every morning and night, which generally procured three mucous and very foetid stools; the patient was also directed to wash her lip often every day with sea-water.

By this method strictly continued for a month, the lip and axillary glands were softened, the belly returned to it's natural condition; and the work so happily begun was finished in three months more, in which time the swelling of the lip was entirely subsided, the knots of the belly were no longer to be felt by the fingers, the glands under

under the arm-pits were reduced to their natural state, and the cure was in all respects completed.

CASE III.

A Beautiful and amiable young lady, scarcely entered into her nineteenth year, having always enjoyed a perfect state of health, by an accidental fall struck her left leg against a stone, but only so as to raze the skin. This seemed to be a slight hurt, and perhaps in a thousand others less delicate, and of a better constitution, it would have proved of no consequence; but the blood which nourished this lovely form was infected with a scrophulous taint, which from this slight cause took fire as from a spark, and broke out soon after into a most dreadful conflagration. This slight wound was at first neglected, and nothing applied to it till the skin round it appeared inflamed and distended; the patient was then directed to be bled, which was three times repeated, and cooling purges were given, emulsions prepared with nitre, and such other medicines as seemed likely to appease the violent emotions of the blood. Such outward remedies were also applied as were of a softening and discutient quality, under the care of a very skilful surgeon: but these medicines and applications were tried in vain; the wound increased every day, and the inflammation now tended towards a suppuration; therefore, lest the bone underneath should receive injury, as soon as the matter began to form, the abscess was opened by the assistance of a caustic, and all possible means used to cure the wound: but in seven weeks from the time the accident happened, there was not the least appearance of healing the sore: the wound grew foul, and the surrounding flesh soft and fungous; the edges were inverted, and instead of a white, smooth, and even matter, a thin foetid and bloody humour was continually

discharged. Nor was the cause of these dreadful symptoms long concealed, for upon a careful examination of the ulcer by the help of a probe, the bone was found to be stripped of it's membrane, and to be itself uneven, rough, and carious; it was therefore necessary to enlarge the wound, to make incisions in the affected part quite to the bone, to cleanse it, and as much as possible, to promote an exfoliation (or scaling of the bone;) nor were these endeavours unaccompanied by the best internal medicines which could be devised to temper the sharp viscid humours and render them fluid, or carry them off by gentle purgatives, for very small doses of calomel, repeated at proper intervals, and bolusses composed of crude antimony, Æthiop's mineral, and the like medicines, with a vegetable diet, drinks prepared of lime-water, varied as the case of the patient seemed to require, and sometimes mild emetics, were at different times employed; and for fear of a hectic fever, recourse was had to asses milk and testaceous powders, taken twice a day. In short, the art of physic was exhausted in attempts to afford the patient relief, in spite of all which her disease gained ground, and every day added some new and aggravated symptom.

Eight months had now elapsed since the unhappy lady had laboured under this disorder, nor had all the efforts of medicine yet produced any hope of recovery, nor any signs that the bone would exfoliate.

The bark and a slight salivation were now proposed as expedients, from one of which hopes might be entertained of bringing the humours into a better state; but the one was rejected on account of the patient's strength being much exhausted, and her being also inclinable to a diarrhæa; and the other gave little hopes of effecting a separation of the bone, though perhaps it might have given her more strength, and might have relieved the hectic fever.

There remained yet one remedy untried, the

the sea-water; and as the disease was so far advanced, no time was to be lost in making this last experiment; the patient was accordingly removed to the town of Newport in the Isle of Wight; and all other medicines but asses-milk being laid aside, she entered on a course of sea-water, in the usual manner, which at first occasioned as usual a nausea and thirst; but these inconveniences vanished in a very few days, the water purged her at least thrice a day, nor did she perceive her strength or appetite impaired by repeating this purgation, but on the contrary, an improvement was daily perceived in both, and growing chearful upon this favourable change, and assuming fresh resolution from the hope which now appeared of recovering her health, she began to bathe also in the sea, at first only twice a week, then three times, and at last every day; and always after her bathing she returned home with additional strength and spirits, and after a month unremittingly spent in drinking and bathing, the appearance of the ulcer was changed for the better, the thin, foetid humour, that daily flowed from it in large quantities, was now turned to a white thick matter without being offensive to the smell, and the quantity was considerably diminished; the edges of the wound appeared soft, even, and depressed, and at length the corrupted part of the bone began to shake upon the touch of the probe, and was soon entirely separated from the sound part. From that time all things went on successfully; the cavity of the ulcer decreased every day, the white or bluish edges grew closer together, and dried up, and in three weeks more the wound was covered with a firm scar: she soon recovered the use of her leg, and after a confinement of a full year, she appeared in public with a perfect re-establishment of health, and never had any return of the disorder.

To the cases already offered, of cures effected by the sea-water in scrophulous

cases, it may not be improper to add one of an obstinate jaundice, ultimately and effectually relieved by the same efficacious remedy.

A man, thirty years old, of a phlegmatic constitution, and of a relaxed and spongy habit of body, after drinking a large quantity of spirituous liquors, to which he had been too much addicted, was seized with a sudden and violent pain about the pit of his stomach, which extended also over all his back, as far as his shoulder-bones, and would neither permit him to breathe, walk, or stand upright: he had a foul and bitter taste in his mouth, a perpetual nausea, and a continual retching up of gall. In this situation a large quantity of blood was taken away, and a gentle purge was administered, which procured two or three stools, and afforded so much relief, that he was apprehended to be out of danger. But the symptoms soon returned, and a confirmed jaundice became evident from his whole skin becoming yellow, and in particular the whites of his eyes and about the temples: he complained of great lassitude, and seemed to have a particular dislike to all kind of motion; his strength was amazingly exhausted, considering the short time he had been indisposed; his breathing was difficult, his excrements small in quantity, white, and somewhat slimy; his urine thick, and so discoloured that it was almost black, and the pain which he first felt was changed to one more dull, with a troublesome sense of great weight under the false ribs; but without any hardness or perceivable tumor. As the obstructions in the passages of the gall are the immediate causes of the jaundice, the usual and proper medicines were administered to remove them; yet, though the symptoms seemed to abate, and the disease to give way in some measure, the skin did not return to it's natural colour, or lose it's yellowness, the pain and sense of weight remained, and, what was still

worse, the patient's appetite and strength were both nearly gone; under these circumstances, the sea-water was prescribed in the quantity of half a pint every morning, which was directed to be warmed, and an electuary of the following form was administered, to the amount of a tea-spoonful in the middle of the afternoon, and at going to rest.

Of conserve of orange-peel, one ounce—cinnabar of antimony prepared, and Castile soap, of each half an ounce—of wood-lice prepared, three drams—of saffron powder—

ed, half a dram—of syrup of orange-peel, enough to make an electuary.

These prescriptions being pursued, in four or five days a favourable alteration took place; the jaundice hue began to disappear by degrees, the strength and appetite returned, the water occasioned a discharge by stool of a vast quantity of bilious and slimy matter, which entirely carried off the pain and weight in the sides, and in about three weeks the patient recovered his health entirely.

C H A P. VII.

Of Medicated Baths, vaporous and dry Baths, and internal and external Fumigations.

THOUGH the ancients appear to have been well acquainted with the nature and use of artificial medicated baths, and recommended them as sure and excellent remedies for the prevention and cure of a great variety of different diseases; yet, either the art of composing them, or the method of applying them, has been long lost, if it was ever known, in this country; or they have been brought into disesteem by imprudent practice, or by the management of designing men.

But from which of these causes, or from whatever other, the neglect of these remedies has arisen, certain it is, that they were wholly unpractised in these kingdoms thirty years ago; and that we are indebted to the skill and perseverance of an ingenious foreigner, for bringing them to an equal degree of perfection and reputation; and, according to a published and well-authenticated list of cures, for rescuing many unhappy sufferers, in the extremity of obstinate, tedious, and complicated diseases,

from the fate which seemed to await them, and by an agreeable and easy process restoring them to health and comfort.

It is from this ingenious foreigner that we have derived the accounts of those improvements in the arts of healing, which we now mean to offer to our readers; and we shall add a few Cases from those which appear most worthy attention, as the best information which can be given of the virtues and efficacy of these celebrated baths.

The apparatus of those in London, consist of five medicinal water baths; six vapour baths; two dry baths, in separate rooms, unconnected with each other; six bed-chambers for sweating; a large drying room; two waiting rooms; two chymical laboratories, in which are prepared the medicinal waters and vapours. These apartments are on the first and second floors, and beneath are baths constructed or constructing for the lower and middle classes of people: under ground are the furnaces, aqueducts,

aqueducts, cisterns and reservoirs of large sizes, for the different solutions and combinations of artificial mineral waters; in the distribution of which, and for modifying the various degrees of heat, above 2500 feet of copper pipes are employed, and an equal number of leaden ones, with 150 brass cocks of different dimensions: the water used in the various solutions and infusions of the several substances necessary for the cure of many complaints, are rain-water, spring-water; and New River water the choice of which, for different purposes, is said to be of considerable importance. Annexed to these warm baths are two other baths, one of which may be either suddenly heated or cooled, as circumstances may require; the other is a capacious cold bath of new and improved construction, and supplied with water from a spring which is constantly running.

The baths, and other apartments for females, are totally distinct and apart from those appropriated to the use of the other sex, and are approached by different avenues.

Patients are invited to reside in the house of the operator, during a course of these baths and fumigations, for the following obvious reasons: the first and principal is the necessity of constant attention to the changes effected by these operations, some of which are so sudden, as to require immediate alterations in the course, which cannot be made after the patient is brought into the house to take the baths, if he does not reside in it; many constitutions will be endangered by colds, to which patients are liable, notwithstanding every precaution, who are taken into the air after using the baths, vapours, or warm fumigations; some who are previously worn out with pain or the effects of medicine, though relieved and refreshed by the operations, will require immediate retirement and rest; and to others nourishment as well as rest will be necessary before it is fit for them to be removed, and

to undergo fresh fatigue; for the accommodation, therefore, of patients who wish to enjoy the whole benefit of these inventions, apartments are provided, and adapted to various ranks in life, from the highest to those in moderate situations, and convenient rooms are also set apart for the reception of out-door patients, whilst their baths are getting ready, and other necessary preparations making.

In the several baths, the degrees of heat are regulated by thermometers; and the whole machinery is so constructed, that the patient himself may, during the operation, increase or diminish the degrees of heat and cold, as convenience or inclination directs: and the whole form together a compleat system of baths, divided into hot, warm, and cold, each under such regulations as to bring it nearer to or remove it farther from the next degree, as occasion and different circumstances may require.

The terms of administering these remedies are moderate; and if a cure can be obtained by these means, the expence will fall short of that commonly incurred in an ordinary course of medicines: for patients who chuse to reside in the house, apartments are provided from four guineas a week to one, and to such each operation is only attended with an additional charge of three shillings and sixpence, except dropical patients, who use the dry stove and bed prepared for this particular disorder, for which they are to pay five shillings each time. Those who do not take up their residence in the house, pay twelve shillings for each bathing or fumigation, and fifteen shillings for the apparatus particularly applied to the dropsy: and those whose cases threaten to require a long and continued course of these applications, may be furnished with tickets entitling them to the use of the different baths and fumigations for 20, 50, or 120 times, at rates not exceeding five shillings each time. We have mentioned the prices for the information of such of our readers as may

may not have opportunities of seeing the plans, which have at different times been promulgated in the metropolis.

These water baths and effluvia are impregnated with such medical substances, animal, vegetable, or mineral, as have been found by experience to afford relief in the several disorders to which they are intended to be applied; and the degrees of strength are proportioned, as well as the heat, to the constitution, habit, and situation of the patient, the violence of the disease, and other circumstances.

And if, according to the opinion of physicians ancient and modern, constitutions may be altered, and diseases cured by remedies externally applied, by altering the disposition of the mass of fluids, without producing any alteration in the insensible evacuation; or by breaking the texture of the diseased matter, so as to enable nature to throw it off by sweat or insensible transpiration; these medicated baths seem to be safe and eligible, as they not only promote the discharge of offending matter, but supply nature through the absorbent vessels, with a salutary effluvia to replace the loss of that which is rejected; and by the same means the finest and most efficient parts of the medicines of which these baths are composed, or with which they are impregnated, are conveyed into the blood, and carried by the circulation into the minutest vessels of the human body.

The operation of these baths and fumigations is also assisted by frictions, which in many cases are of infinite use; and in particular in consumptive cases, rubbing the muscular parts hath often been attended with the most favourable effects.

To these may be added the pump, throwing the medicated water partially on the particular parts of the body which are affected; in prescribing or ordering which, regard must be had to the part on which it is to be applied, the degree of heat and force necessary, and the particular medi-

cal quality with which it should be impregnated; and to answer these purposes, the pumps are so constructed, that the quantity of the falling water is at pleasure increased or diminished, either with or without lessening or increasing it's force, from the smallest stream to the quantity and strength of a fire-engine, the strength and quantity of medicine with which they are impregnated, being also proportioned to the nature and exigency of the case.

The disorders in which these various preparations are applied with success, are the scurvy, disorders of the skin, suppression of any of the secretions, consumptions, dropsies, gout, rheumatism, obstructions, palsy, epilepsy, schirrhous tumors, ulcers, white swellings, contractions, relaxations, fevers, nervous disorders, asthmas, weakness of body, scrophulous and venereal complaints, retention or suppression of urine, gravel and stone, head-ache, deafness, and many other diseases both acute and chronic.

But besides the above-mentioned water and vapour baths, medicated with vegetable and mineral substances, others of a different nature are offered, some composed wholly and others partly of oil, some of milk and some of broths; all which have been used with success in particular cases, but being necessarily attended with a very considerable additional expence, an estimate is previously given, that the patient or his friends may judge of the prudence or convenience of having recourse to them; some vapour baths and fumigations are also proposed, made only with the effluvia of liquid balsams and essences, and these are also of course expensive.

Upon the whole, there appears much ingenuity in the construction of the whole apparatus, which is as compleat and extensive as the nature of such a plan in it's fullest extent will admit; the use of it seems to be rational, and the benefit which we are taught to expect from it, supported by the strongest probability; nor do we wonder

wonder that in cases where the other remedies have been tried in vain, these should frequently prove efficacious, because most chronic complaints are undoubtedly occasioned by obstructions; and the use of warm baths, vapours, pumps, and frictions, seem obviously calculated to remove them, especially when these applications are persisted in for a regular course, as is always recommended by those who undertake to attempt cures in this way, as the only probable chance of receiving the expected benefit.

C A S E I.

A Young lady, daughter of an eminent surgeon of London, got a cold in the passage of the Opera-house waiting for her carriage, and was seized with hoarseness and a cough. In the course of seven or eight weeks, the expectoration was full of matter, and in great quantity, attended with every perypneumatic symptom, such as inflammation of the lungs, difficulty of breathing, pains in her breast and sides, so that she was not able to lie down in bed; her pulse was small, and beat at the rate of one hundred and fifty pulsations in a minute, horrible pains spread from the breast to the shoulders, a fixed destroying obstruction prevailed, and what moisture appeared on the skin was only produced by the violence of coughing. Every method had been taken for her recovery by seven of the most eminent of the faculty, such as twenty-five times bleeding, repeated blistering, emulsions, asses-milk, and the like, without effect. She was not able to stand a minute upon her legs, and sending her to Bristol was advised as the last resource; but as it was apprehended she would not live ten days, it was then recommended to her friends by a physician and a surgeon to try the medicated baths, stoves, and fumigations, from a conviction, that much

good had been effected by them in similar desperate diseases: this trial was made for a few days, as she was at first thought to be too far gone; but in ten days she was able to lie flat in bed, her cough became much abated, the expectoration of matter lessened, there was no sign of blood, an universal gentle perspiration appeared, the respiration continued free and easy, and ensued without pains, which before were excruciating. The obstructions were opened, her pulse was reduced under one hundred pulsations, and her appetite was greatly mended; in five weeks she was able to walk a mile, in a short time was quite recovered, and has since remained in the most perfect state of health.

C A S E II.

A Lady of fortune was afflicted from the year 1767, with such a total obstruction as prevented the least perspiration or moisture on her skin, attended with constant excruciating pains in her stomach, being almost every night, from convulsions, and spasms, obliged to get out of bed and roll on the floor for three or four hours together, her whole nervous system being extremely affected and weakened; she was in this condition for six years, during which time she could not retain any kind of food in her stomach for half an hour, and frequently had horrible vomitings, attended with the most vehement hysterics and convulsions, so that she was confined to her bed for six weeks together, and the very little rest she could obtain, was from taking almost every night a large quantity of liquid laudanum, with three or four pills of the extract of opium, which rendered her at intervals stupid. As her rank and situation in life enabled her to have the best advice, she consulted the ablest physicians of London, Bath, Bristol, and other parts of England,

but without effect: at length, despairing of relief, and reading in the public newspapers, the surprizing cures performed by the bathing and fumigating inventions, she put herself under a course of them, and, by administering to her night and morning the medicated water baths, vaporous baths, moist and dry fumigations and frictions, in eleven weeks her obstructions were opened, her perspiration was recovered, her spasms and convulsions were removed, her sleep, spirits, and vigour were restored, her digestion, and nervous system were strengthened, and she was blessed with the enjoyment of perfect ease and health.

CASE III.

A Merchant of London, of a scorbutic habit, was attacked with a nervous complaint, which having been injudiciously treated in the beginning, grew worse every day: unfit to transact his business himself, he was obliged to trust the management of it to others, who, taking the advantage of his indisposition, imposed upon him, and injured his affairs. These circumstances aggravated his complaint, so that by degrees he grew melancholy, his pulse very slow, his body intensely cold, himself fond of solitude, and averse to motion, so as to lay for six or eight hours together on a chair, without even changing the posture of his body: yet, notwithstanding his situation, he did not neglect to try various remedies, and to consult with several of the faculty, in order to free himself from such a wretched state of body; he took many medicines of different kinds to no purpose, followed the prescriptions of regulars and quacks, and used the warm natural mineral bath, the common warm bath, cold bath, and sea-bathing, without advantage. At length, being informed of the efficacy of the artificial medicated baths and fumigations, he entered upon a course of them,

and by going night and morning through these operations, in four months time he was perfectly recovered.

CASE IV.

A Merchant of London, about thirty-four years of age, of a full and sanguine habit of body, had been afflicted for a very considerable time with the most violent and torturing rheumatic pains, fixed on the joints of his fingers, hands, arms, thighs, legs, and feet, which at times were so great as to raise a fever, and confine him to his bed.

The best attendance, and the most probable remedies the common practice could afford, were used in vain; his disorder gained ground greatly every day, his body became bent and contorted, the muscles of his neck were so contracted as to draw his head very much downward, his joints began to swell, and the pains and fever to increase: in such a state he was recommended to the medicated baths and fumigations.

The causes of his unhappy situation were two; the first proceeded from a cold he took after exercise, which immediately brought on an obstruction of perspiration; the second was the imprudent use of a cold bath, a remedy worse than the disease.

In consequence of the advice he had received, he went twice a day through a regular course of these operations, taking now and then some mild purgatives: the cure was begun with the application of emolient water and vapour baths, five degrees under the animal heat; and gentle friction, till the bulky particles of the obstructed humours were reduced, and the diameters of the perspiratory vessels were enlarged. Aromatics and astringents then took place, with the pump, the saponaceous and spirituous frictions; and in two months time the patient became an healthy

healthy man, able to enjoy all the pleasures of life.

CASE V.

A Young gentleman, about nineteen years of age, was recommended to the use of the medicated baths for total deprivation in the tensions of one of his feet; it appeared entirely dislocated in the ankle, where the muscles, sinews, and ligaments, were so amazingly relaxed that he could by no means put his foot to the ground. His station in life enabled him to procure the best advice. The power of medicine, astringent fomentations, plaisters, unctions, and the use of iron and wood machines, contrived by physicians and surgeons of eminence, had been long applied without success: the patient and his friends were without hope, when they were advised to this measure; yet, by three months use of the medicated water-baths, vaporous and dry baths, moist and dry partial fumiga-

tions, spirituous, saponaceous, and dry frictions, he was perfectly cured, and continues in good health.

CASE VI.

A Captain of foot in the service of the East India Company, about thirty years of age, having slept in damp sheets, was suddenly taken with a swelling in his legs and belly, which gradually increased upwards, even to his face; and, in spite of the best advice and medicines, the disorder terminated in an alarming desperate dropsy, in which state the gentlemen of the faculty who attended him, determined to tap him, as the only means to prolong his life: but, being advised to try the dry stove and bed, and other means recommended in these Cases, and persisting in them five weeks, his complaints abated by degrees, and at the end of that time, he left the house in perfect health.

C H A P. VIII.

Of Tar-Water, and Lime-Water.

IT would be unpardonable to dismifs the subject of natural and artificial medical waters, without mentioning *tar-water* and *lime-water*, the former of which was a very few years ago in such high reputation, and the latter being at present occasionally prescribed in a variety of disorders.

The nature and efficacy of tar-water have been so fully discussed, and so highly celebrated, by a right reverend divine, that little can be added; nor are we ourselves so sanguine as to attribute to it all the virtues which that ingenious and humane writer so liberally ascribes to it: and the declension

of it's reputation since the publication of the Treatise to which we refer, has been so considerable, that we feel ourselves fully justified in declaring, that though it may possibly be serviceable in some particular cases, yet we are of opinion, that a general use of it, in the vast variety of disorders for which it has been prescribed, may be attended with very dangerous consequences: we are not inclined to believe that an universal remedy for all diseases hath ever yet been discovered, or that such a discovery is at all likely to take place; nor are we convinced that tar-water is in the

the list of those which have proved most serviceable in the various maladies which afflict the human body.

Yet we do not mean to assert that tar-water is devoid of all good qualities, and that it has in no case been beneficially used; on the contrary, we are convinced that in particular cases, and under proper regulations, it may be administered to advantage: it is not against tar-water as a medicine, but as a panacea, that we contend.

In scorbutic and scrophulous cases, it has undoubtedly afforded relief, but it must be used with caution in dry and austere habits; and patients, habitually costive, will require to have their bodies kept open by gentle laxatives, during a course of this water; nor will a few doses of purging physic be improper, previous to entering upon it.

In consumptive disorders it has been also prescribed, but we apprehend it will not be consistent with the patient's safety to give it in such cases of this disease as are attended with fever or hectic heat, which it may probably increase, and the nausea which it frequently occasions, may also bring on a retching, and add to the inflammation.

In asthmatic complaints it is said to have produced very favourable effects, but the same caution seems necessary in prescribing it for disorders of this nature.

As a dissolvent, it has been recommended as a remedy for the gravel and stone, and as a diuretic, in retention and suppression of urine.

It has also been mentioned as an alterative in many chronic diseases, such as gout, rheumatism, and dropsy; and the dose in most cases, is from one half pint to three, in twenty-four hours.

To make tar-water.

Take of the best and purest Norway tar, four pounds—of spring water, two gallons.

Pour the water on the tar, stir it well with a strong stick; cover it close and let it stand twenty-four hours, then pour it carefully off for use, taking great care not to disturb it.

After the tar-water has stood the twenty-four hours, a scum rises on it of an oily nature, and this being carefully taken off with a spoon, hath been recommended as a dressing on pledgets or dossils of fine flax or lint, for old wounds or ulcers, occasioned by scrophulous or scorbutic tumors; it has also been prescribed as an unction in obstinate pains and aches in the limbs, and contractions of the joints.

We have already had occasion to mention lime-water in treating of various disorders, in which it has been prescribed, and in particular in consumptive cases, in gleets, in scrophulous disorders, and in the gravel; and we must refer our readers to the several heads under which the nature and cure of these diseases is pointed out for the application of this water: to what will be found in these chapters, a general caution may be added, to exercise great care and discretion in the administration of this astringent medicine, an over quantity of which injudiciously applied, may be productive of very disagreeable consequences.

We have in a former part of this work given the method of making lime-water from calcined sea-shells, which is the strongest and best, and of which two half pints may be substituted for three of common lime-water, the preparation of which is as follows.

On one pound of fresh burned quick lime, pour gradually two gallons of spring-water; stir the whole well together, let it stand perfectly undisturbed twenty-four hours; at the end of that time, pour the liquor off carefully from the sediment, and afterwards filter it through paper. It may be kept some time in bottles closely stopped.

B O O K IX.

Strictures on Quackery in general, and a candid Examination of several popular Medicines.

C H A P. I.

Of Quackery in general.

IT is not an easy matter to determine what mode of administering medicine comes within the description of *quackery*; we can hardly extend it to all advertised remedies, because in that case we must involve many prescriptions of eminent and regular physicians, who, actuated by various motives, have communicated their discoveries to mankind in this way, or the fruits of whose labours in the invention and application of new medicines, have found their way into the world by accidental means without their concurrence.

There are also some medicines which have been reported to be so highly efficacious in the cure of particular disorders, that the legislature have thought fit to pay the inventors or proprietors the price or reward of their ingenuity, and to publish the compositions and applications of these nostrums for the general benefit of mankind.

But we do not apprehend that either of those classes come properly under the denomination of quackery. Where the component parts of a medicine are publicly known, as well as the exact manner of preparing it, or where it comes forth sanctioned by the name of a regular physician of known and approved abilities and integrity, however it is promulgated, or in whatever way the diseased are supplied with it, we do not apprehend that in either

case the medicine ought to be considered as quackery, or that its value is at all lessened by being vended at such a price as renders it attainable by the afflicted in every station of life or degree of circumstances.

But in our opinion, those are properly termed quack medicines, which are either advertised under fictitious names, or anonymously; those of which the composition is unknown, and the compounders and venders of which are either ignorant pretenders to medical knowledge, or men in situations and professions of life, totally remote from the profession of physic.

Under the burden of medicines thus surreptitiously obtruded on the world, do the public at this moment groan; and not only the newspapers and other periodical publications are filled with advertisements recommending these doubtful compounds, but every corner of the streets is furnished with distributors, who load the passengers with pamphlets and hand-bills, promising in the strongest terms of assertion infallible relief to the diseased in all cases, and inviting them to swallow the same remedy for the cure of disorders so different in their natures as to make it obvious on a moment's reflection to all but the grossly ignorant, to whom indeed these delusive applications are particularly directed, that the use of them must be wholly ineffica-

cious in all diseases, or extremely dangerous in many; yet such is the credulity of mankind, that they suffer themselves to be duped by such bare-faced artifices; and depending on a catalogue of pretended cures, into the truth or authenticity of which they never give themselves the trouble to enquire, they add to the number of the deceived, and without regard to habit, constitution, age, or sex, dose themselves with pills, potions, and powders, merely on the credit of these fabricated attestations; and at the expence of their healths, and to the danger of their lives, minister to the fraud and avarice of those retailers of poison, the profits of some of whom are so extravagant, as to support them in the enormous expences of magnificent town-houses and country villas, splendid equipages, trains of servants, and all the appendages of rank and fortune: though some of these self-created doctors are selected from the lowest of the people; and we are credibly informed, that one in particular now flourishes in this metropolis, and sits at ease in his own carriage, who a very few years ago was worthily employed in driving one of those which ply in the streets for the convenience of the public.

But these compounders of drugs are not content with advertising their miserable inventions in newspapers, handbills, and pamphlets; volumes are daily obtruded on the public which many of the nominal authors are unable to read, and the pens of numerous garretteers are daily employed to extol the compositions and celebrate the virtues of these spurious medicines, and to persuade the deluded multitude that the most dangerous diseases may be removed, and the most desperate cases relieved, by these balsams of health, each of which, according to the pompous accounts of those hireling eulogists, possesses all the powers of the whole *materia medica*, and is alone sufficient to prolong the human life in strength and vigour to a pe-

riod of years beyond that which hath been allotted to the race of man.

Nor does the evil stop here: fraud is committed upon fraud; the wrappers and seals, of the most saleable of these nostrums, and even the hand-writing of the signatures purporting to be the proprietors names, are imitated, and a set of wretches, one degree worse than the former, without the smallest knowledge of the compositions they mean to vend, substitute others of the cheapest ingredients they can procure, and without the least regard to the diseases which they pretend to cure, fill these papers of directions with drugs diametrically opposite in quality to those they were intended to cover; and confounding all distinction of medicines, apply them as chance directs. We are sorry to add, that shops of reputation are to be found, base enough to participate in these practices of infamy, and to share in the price of their fellow-creatures destruction,

That evils of such magnitude should be suffered to pass unnoticed, and that the lives of such numbers of the most useful members of society should be suffered to be thus trifled with or sported away, without the interposition of a legislature, in most other instances equally careful of property and life; who have with the utmost wisdom and humanity framed and enacted laws, enforcing the severest punishments, attended with additional circumstances of severity and solemnity, on those who lay violent hands on their fellow-citizens, and yet permit poison, in a thousand forms, to be daily administered without check or controul, and health to be undermined under the specious pretext of removing disorders which these misapplied medicines serve only to aggravate; and that no benevolent member of the great councils of the nation, should turn his attention to an object of such importance, is sufficient to excite our wonder and astonishment: and still more surprizing is it, that the learned body

to whom the practice of physick is legally committed, and whose abilities are as extensive as the powers with which they are invested, should suffer such enormities to proceed without their intervention, either by an application to parliament to stop the progress of such alarming practices, or by exposing the composition and effects of the several quack medicines offered to the public; detecting the falsity of the pretended accounts of cures performed by them, and exhibiting catalogues of the injuries sustained by those numerous individuals, whose lives have been destroyed or rendered comfortless by this unwarrantable traffic. Surely, the universal silence of the faculty on these momentous concerns, seems to countenance an insinuation which we are well persuaded is wholly unjust, that the regular professors of physick are interested in the dissemination of these spurious nostrums, the suppression of which would lessen the progress of disease, and of course diminish the number of patients who are ultimately compelled to seek relief from them, for the disorders brought on by quacks, empiricks, and mountebanks.

If we might venture to offer a few hints on a subject apparently so consequential, we would submit to the legislature the propriety of erecting a public board, composed of the most eminent physicians, for the examination, analyzation, and approbation, of every new medicine, before an advertisement should be admitted into any newspaper or other periodical publication, and before it should be vended in any manner whatsoever.

To this board, all persons who had any supposed medical improvement to offer should apply, and state on oath the ingredients and composition of the proposed medicine, and the disorders to which it is meant to be applied; and if, after due deliberation and consideration, the members of the board should be of opinion that it may probably produce the proposed effects,

they should immediately underwrite such opinion on the advertisements intended to be published, and under that sanction the medicine should be publicly sold.

But if the physicians who compose this board should determine that the composition offered to their examination is unfit or inadequate to the ends proposed, and that it is either unsafe or improper to permit the general use of it; in such cases, they should deliver to the inventor or proposer their reasons in writing for their refusal to licence the publication and sale, and a certificate purporting their having analyzed the medicine, and describing the ingredients of which it is composed, and the manner of preparation; after which the proprietor of such medicine might be at liberty to promulgate his invention in any manner he might think fit, provided every advertisement, hand-bill, or other publication, contained an exact copy of the reasons and certificate of the examining board.

That the same board should carefully examine into the truth of all cases and attestations of cures published in support of any advertised medicine; and in case any of them should be discovered to be fraudulently fabricated, to declare the same by public advertisement, in order to prevent the continuance of the imposition.

And to defray the expences which would necessarily attend such investigations, a small fee might be paid with each medicine and prescription submitted to these examiners, the amount of which might be applied to such purposes only; as it cannot be doubted but that the members of the College of Physicians would be happy to execute an office so essential to the public benefit, without the smallest view of private emolument.

But we are well aware that the plan we have proposed is extremely imperfect, and that the execution of it in its present form would be attended with many difficulties;

we

we can only plead in excuse for offering it, our zeal to remedy an increasing evil, and our hope that our humble attempt may induce some much abler writer, to suggest one better calculated to answer the important end for which it is designed.

Actuated by the same motives, we have in the following chapters offered our opinion with freedom on some of the most notorious popular medicines at present exposed to public sale in this metropolis: in doing which, as we had no private interest or resentment to gratify, our praise or censure has been precisely the result of our

judgment or experience; we have examined the accounts which have been published of them, and the cases adduced in support of their efficacy, with the most unprejudiced candour, and have rejected no evidence that could be found in favour of all or any of them. It would give us the sincerest pleasure to declare, that we thought them all equally intitled to our approbation, and that the administration of each of them was equally unattended with danger; but on such a subject, it is absolutely necessary to speak without reserve, nor will any degree of delicacy be justifiable.

C H A P. II.

Daffy's Elixir.

THIS is unquestionably an innocent medicine, and may in many instances be administered with advantage. The following is said to be the composition of it.

Take of raisins of the sun stoned, half a pound—of the leaves of fenna, six ounces—of carraway seeds bruised, two ounces—Infuse these ingredients a month in two quarts of French brandy, then strain it off carefully, and bottle it for use.

Simple as the composition of this medicine is, it has been extolled for the cure of an infinite number of diseases; and the venders of it, in the true spirit of quackery, inform the public that it exceeds all others, and has received the approbation and sanction of many eminent physicians.

The bills which are dispersed to promote the sale of Daffy's Elixir, recommend it to all persons afflicted with chronic diseases, and in particular gout, stone, gravel, ulcers in the kidneys, colic, phthisic, dropsy, scurvy, hypochondria, green sickness, con-

sumption, want of digestion, agues, and piles.

It is also asserted, under the same authority, to be serviceable in most disorders which affect children, such as wind and crudities occasioned by ill digestion, gripes, worms, rickets, stone, convulsions, and king's evil.

It is directed to be taken night and morning by way of purge, in such quantities as age, constitution, habit, and other circumstances may prescribe, from a tea-spoonful in infancy, to three table-spoonfuls for grown persons; though it is said to be adviseable to begin with small doses, and increase them by degrees at every repetition; confinement is not required, yet the patient is ordered to work off this phycic with gruel or broth.

Having given the prescription from which this medicine is prepared, it is unnecessary to say that it may be safely administered as an innocent and inoffensive purge, in costive habits, and in most cases where laxatives of a more cooling nature are not required.

C H A P. III.

Dr. James's Powder.

THIS Powder, though advertised for sale, and therefore coming properly within the description of popular medicines, being the invention of a regular physician, can by no means be classed with the nostrums of quacks.

It has been justly celebrated for several years past, and has been administered in a variety of cases, both by the inventor himself and others, with such a degree of success as to establish its reputation beyond the possibility of doubt.

This medicine is a preparation of antimony, differing perhaps from the fever powders of the Edinburgh and London dispensaries, in the degree of activity acquired by some particular process, either in preparing the separate ingredients or combining them; for when either of the last-named medicines have been substituted for the genuine powder of Dr. James, it has either failed to operate at all, or has affected the patient in such a degree only, as to produce few or none of the happy consequences which have so often taken place from the administration of the medicine now under our consideration.

But that our readers may be enabled to form some judgment of the nature of this medicine, though the particular manner of preparing it remains with the representatives of the original inventor, we shall present them with the form of the fever powder of the London Dispensatory.

Take of prepared crab's eyes, three scruples—
of emetic tartar, two grains. Mix these powders carefully in a mortar.

But we do not offer this prescription to supply the place of James's powder, which

we have no scruple to admit is highly preferable whenever it can be procured, a preference which we are induced to allow to this powder, from a perfect conviction of its superior efficacy in many cases, though perhaps we may not concur in prescribing it so universally as the inventor himself, whose sanguine opinion of its extensive and prevalent virtues, may probably be justified by greater experience of it than can fall to the share of any other single physician.

The diseases for which it has been particularly recommended by Dr. James himself, are fevers, small-pox, measles, flow fevers, nervous disorders, the yellow fever, the head-ache, the rheumatism, the ague, colds, and consumptions.

The very ancient method of treating fevers, when the practitioner depended on warm cordials, juleps, confections, and sweating medicines, and seldom ventured to bleed, and scarcely ever to purge and vomit, hath been very justly exploded by the father of modern physic, whose practice hath not only been adapted by the physicians of the present day, but hath received very considerable improvement from the certain and invariable success of these evacuations in many feverish cases, which hath encouraged the practitioners in physic to extend them to some in which they have formerly been avoided; as pregnant with the most dangerous consequences.

The truth is, that attempts to excite additional heat in the human body, already inflamed by disease beyond the degree of warmth necessary to concoct the humours which occasioned the fever, appear so extravagantly absurd, that it seems astonishing such measures should ever have been

adopted by men who have evidently studied the nature of diseases, and acquired a degree of knowledge in their natures, symptoms, and effects.

The operation of this medicine is by vomit, stool, urine, and perspiration; yet it does not often produce all, nor sometimes, even when it acts efficaciously, any of these effects; and it seems to possess a peculiar and almost singular property of producing that effect only which the constitution, habit, and situation of the patient, renders him most capable of supporting.

In some cases, indeed, this valuable medicine hath failed of success, and those in general have been frenzy fevers, or such as have been attended with comatose or lethargic symptoms, in a very considerable degree, attended with great oppression at the breast, and deep or difficult breathing.

But the very best account that can be given of the virtues, administration, and effects of these powders, will be deduced from the well-authenticated cases which we have subjoined, and which have been selected from a great variety of others, equally supported by undoubted proofs, in order, as much as possible, to point out the use of this medicine in different diseases.

We do not think it necessary to apologize for speaking warmly in favour of this happy improvement in medicine; we think ourselves fully justified in bestowing upon it that praise which we cannot withhold without manifest injustice, since we are fully authorized from our own experience, and the evidence of many candid and ingenious physicians, to declare that few compounded medicines have been found equal to James's powders, in removing fevers attended with the most alarming and dangerous symptoms, and in the most advanced and aggravated states of these diseases.

CASE I.

A Gentleman being on a visit at Sir Neville Hickman's, at Bare-Hill, Berkshire, was seized with a fever. In the first night it abated, but on the next day it returned with great violence. On the third day, an apothecary took away some blood, and on the fourth, a blister was laid on the patient's back. On the fifth day, he grew extremely ill, when a physician was called in, and about four or five days after, another; whose high reputation in their profession will remove all manner of suspicion that any thing was neglected which could contribute to the patient's recovery. During the week he was bled twice more in the arm, twice in the temporal artery, was cupped several times, once bled with leeches, had two more blisters applied to the arms, two to the legs, one to the head, and two plaisters to the feet. On Sunday, April 22, being the tenth day from the seizure, the patient was so extremely ill that the person who attended him went down stairs to Sir Neville Hickman, and told him he was dead; but upon his discovering some signs of life, Sir Neville made the attendants endeavour to force down a dose of Dr. James's fever powder, of which about a third or fourth part was swallowed. On Monday and Tuesday, the 23d and 24th, the patient seemed much better, but the powder was not then repeated. On Wednesday he relapsed, and on Thursday was so ill that his physicians had not the least hopes of his life. On that day, April 26, he took, for the second time, a dose of Dr. James's powder; and on Friday, April 27, was much better. This medicine was repeated; and, to the great surprize of almost every body, he continued to mend hourly, and in a few days perfectly recovered.

CASE

C A S E II.

IN the beginning of November 1751, the Right Hon. the Lord Falkland being at Montauban, in France, visited an English gentleman there, who was thought to be expiring of a fever, his physicians and friends having given up all hopes of his recovery. He had taken a great quantity of the bark, which, far from doing him service, appeared to have been prejudicial to him. At this time he rattled in the throat, was very much delirious and insensible, and excessively hot and low. At seven in the morning Lord Falkland gave him half a paper of Dr. James's fever powder, which threw him into a profuse sweat. Two hours after, he took another half paper; in consequence of which he brought up a large mouthful of very black bile, had some stools, and sweated plentifully. Betwixt twelve and one he sat up and spoke, and became sensible. At three he took a whole paper, and the medicine was repeated at proper intervals, according to the printed directions. In consequence of this, he perfectly recovered from his disorder, and in a few days regained his strength.

C A S E III.

MR. John Hearne, clerk to Mr. Madden, an insurance broker, in Castle Alley, near the Royal Exchange, was at the Sessions-house on Friday the 27th of April 1750, during the sessions which proved so fatal, and remained there the whole day to hear the trials. On Thursday, the 10th of May, he was seized with a violent fever, and was extremely convulsed and delirious till Wednesday the 23d, when a prodigious number of ill-coloured spots appeared all over him, which never rose above the surface of the skin. Many blis-

ters were applied to different parts, but without any good effect; and he was given over by every one. On Wednesday, the 23d, about noon, he took ten grains of Dr. James's powder, and repeated it every six hours. About seven o'clock on Thursday morning, the 24th, he began to sleep, and slept three hours, and then awaked perfectly in his senses, free from convulsions, and repeating the medicine, speedily recovered. It was particularly remarkable in this case, that his blisters, which were perfectly dry, began to run again profusely, after taking four doses of this powder.

C A S E IV.

MR. Ruffel, bookfeller, at Horace's head, without Temple Bar, mixed with the crowd to see the prisoners brought down on the 30th of April 1750, to receive sentence. On Thursday, the 10th of May, he was seized with a fever, attended with a delirium and strong convulsions. Some few spots appeared upon him, but went in again, so as scarcely ever to be very perceptible; and upon the whole, he was so ill, that a physician of great eminence despaired of his life the first time he saw him. Wednesday morning, the 23d of May, being the thirteenth day from the seizure, he took ten grains of Dr. James's fever powder, and repeated it every six hours. On Thursday, the 24th, in the morning, he had slept and was remarkably better; he continued to take the powders that day and the next, mending every hour till his perfect recovery.

C A S E V.

A Surgeon in the country was called to a girl about eighteen years of age, by her father, who told him that she had lost her speech twenty-four hours; and he found

found she had no perceptible pulse, and could but just perceive her breathe, except sometimes when she fetched a deep sigh; her eyes were fixed, and her extremities cold. In this deplorable situation, he endeavoured to get down some of Dr. James's fever powder, mixed with a little treacle. After several attempts, she took the quantity of a quarter of a paper, and found that in half an hour she grew warmer; he could just perceive a pulsation in the wrist, and she breathed with difficulty; soon after this she moved her eyes, and in less than an hour puked once, and then asked to drink. Some gruel was accordingly given to her, and half a paper more of powder; (her pulse was at this time raised and quick.) After taking this dose, she fell asleep, and a gentle sweat ensued; and in about two hours she awaked, had a stool, and brought away several worms of different sizes. She complained of no pain, except in her belly. In this situation, the surgeon left her, with directions to her friends to give her a quarter of a paper of powder every six hours, to keep her from getting cold, and to give her gruel to drink. She took four doses of the powder above-mentioned, and sweated greatly for thirty hours, during which time she had several foetid stools, and brought off a very great number of worms, some dead, but most of them alive. From this time she began to recover, and in three weeks was able to walk up a hill, which a difficulty of breathing for six months before, had prevented her from doing. The elixir proprietatis was then administered to her morning and evening, and she was perfectly well in five weeks time.

C A S E VI.

A Clergyman, near Lincoln, was desired to visit a shepherd in his parish, in order to read the departing prayer; and he

went about ten in the morning, and found him lying speechless, with his tongue hanging out of his mouth. Upon enquiry, his wife told him her husband had lost his senses for five days last past. He was extremely hot, his tongue very clean, and of a good colour, and his pulse regular, but very strong: he had had no stool for eight or nine days; and a blister, which they had laid on five days before, did not rise. The humane clergyman told his wife, if she would be sure to follow his directions, (for while the man was in his senses about ten days before, he had refused to be blooded or take a vomit, as he had desired) he did not doubt but that he could do him good by giving him some powders (meaning Dr. James's) which he had by him. She promised compliance, and he ordered her to give him a clyster immediately, and apply a blister to his back and head. Two hours after the clergyman called again, and finding every thing done as he had ordered, and a large discharge by the clyster, he gave the man half a paper of Dr. James's powder; but that having no visible effect, he repeated it in an hour and a half. In an hour after this, he began to have convulsive twitchings, and to lift up his eyes, and shew great signs of death; but he soon began to vomit, and bring up slimy stuff, which was succeeded by three worms, one of which was upwards of a foot long. In short, in three hours after taking the first half paper of powder, he sat up in bed, was chearful, sensible, and easy. The next day he repeated the two doses, and brought up two more worms, much like the other; and in four days after, his benefactor saw him in a market, seven miles from home, very well, selling sheep.

It was very remarkable in this case, that before the giving of Dr. James's powders, the blisters never rose; but in a few hours after these were administered, they rose very well.

C A S E

CASE VII.

THE servant of a clergyman of Welling, Lincolnshire, being at Bath with his master, the 15th of March 1752, was seized with the small-pox, of a very mild and favourable sort, which turned in the seventh day after the eruption, and went off in the most desirable manner. But, about the second day after the eruption, he was seized with a delirium or frenzy, which arose to such a height, that he foamed at the mouth, refused all liquor, and endeavoured to bite the attendants. This made two eminent physicians that attended him, suspect that besides the small-pox, he had that distemper which arises from the bite of a mad dog; for this reason they endeavoured to give him the Tonquin remedy, but could not get him to take it. When the small-pox was entirely over, the delirium still continuing in a violent manner, all proper measures were used to remove it, but in vain; and at last the physicians left him as incurable. In this state, he took at once two whole papers of Dr. James's fever powder, after which he slept half an hour, and waked in violent ravings. The powders having no visible effect, he took another whole paper two hours after the first; after which he slept again, and awaked in the same way. This paper likewise producing no effect, in two hours after he took a fourth whole paper, which in about half an hour operated by purging. His ravings after this grew less violent, and he eat and drank any thing they gave him. He continued taking the powders three times a day, for three or four days, after which cataplasms were applied to his feet, as also a blister to his head; and upon taking the powders twice a day for a week more, he perfectly recovered both his senses and his health.

CASE VIII.

A Poor woman, very big with child, and much fatigued by a long attendance on her husband in a violent fever, was, December 7, taken ill of the same disorder. The whole pleura, was greatly affected with stitches, and violent pains extended themselves to the head, face, and neck. She lost about thirty ounces of fizy, dark-coloured blood, in the beginning; and in regard to her circumstances, the cure was first attempted by nitrous and saline medicines, without any manner of effect. The danger became every day more imminent. December the 19th, the fever, which settled in her head, was attended with excruciating pains, violent heat, thirst, and anxiety, and she had been confined a week to her bed, in which time she had not once slept. From the beginning she had been importunate for James's powders, which saved her husband's life. Accordingly, this night she took about seven grains, which were repeated every six hours to a third time. The operation was very gentle. Next day, December 20, in the afternoon, the fever, with all it's symptoms, entirely left her: an happy event for herself and family; for at night labour-pains came on, and she was in two hours delivered of a child at it's full time. She continued well, her condition considered, till December 23, when the symptomatic fever appeared. Her head was violently affected, and she grew delirious. The powders were repeated, and the dose increased, with a proper degree of caution, from seven to twelve grains. All complaints were soon removed; her milk was preserved; she gave suck to the child; and both remained perfectly well.

C A S E IX.

ON Friday, the last day of December 1756, a child of twenty months old, (the son of a nobleman of the first rank) on suspicion of the measles, was bled to five ounces, and no signs of inflammation appeared. On Saturday the 1st of January 1757, about five o'clock in the afternoon, the measles were visible. On Sunday the 2d, they appeared full on his face and body. On Monday the 3d, they began to decline, and a hoarseness, cough, and fever, came on. On Tuesday the 4th, in the morning, the pustules had quite disappeared, without leaving the least redness, and the unfavourable symptoms increased. He was then again bled to five ounces, the blood shewing no signs of inflammation; and about three in the afternoon, the apothecary who attended him found more violent symptoms, such as increased heat, wheezing cough, universal languor, and fluttering pulse; on which he applied blisters to the back and arms, and a physician was sent for, who arrived about eight o'clock on Tuesday night, and found the fever very high and the cough violent. On Wednesday morning the 5th, the symptoms rather abated; a clyster was given him, and at three in the afternoon (at which time the fever was very violent) three ounces of blood were taken from him, which shewed no marks of inflammation. He bore this bleeding so very ill, that it was with great difficulty he was brought to himself: however, on his recovery from the faintings, he appeared relieved, and had a tolerable night. All Thursday morning the 6th, he continued easy; but at three o'clock in the afternoon he was seized with great difficulty of breathing, and seemed in the utmost danger. Two blisters were then applied to the legs; and as the case became doubtful, (notwithstanding the physician had with great judg-

ment prescribed every thing that seemed proper in his case) the noble father of the infant desired that Dr. James's powder might be given, and at the same time requested the attendance of the physician during the operation, to which he readily consented, and gave the greatest satisfaction by his particular care and attention. Accordingly, at five in the afternoon, four grains of Dr. James's powders were given, which in thirty-nine minutes vomited him briskly for an hour, and gave him two stools. At nine o'clock three grains more were given; in twenty minutes he had one gentle puke, and went to sleep. The pulse growing quicker in four hours afterwards, which was one o'clock in the morning, he took four grains more, which immediately came up; he then vomited twice in an easy manner, had two stools, went to sleep, but continued vomiting and purging gently, at distant intervals, till Friday morning at seven o'clock. On Friday morning the 7th, about three o'clock, the fever left him, and he continued free from it till nine at night, when his pulse rose a little. Between ten and eleven he took four grains more of the powder, which in forty minutes made him extremely sick; he had several strains for two hours, but never vomited.

Though his cough had been extremely troublesome before, it was remarkable he never coughed once during the two hours of his sickness: he then fell into a sound pleasant sleep, and the fever left him.

On Saturday morning the 8th, about three o'clock, it was observed his breast had sweated through his shirt and gown, after which he seemed greatly relieved in his breath and cough. About three in the afternoon, as he seemed free from the fever, a dose of rhubarb was given him, and he remained free from disorder, except a gentle cough.

C A S E

CASE X.

A Man about thirty-five years of age, of a robust constitution, after a quarrel with his wife on the evening of May 31, 1769, mixed more than half an ounce of arsenic in a cup of ale, and drank it off. The poison soon began to affect him, and perceiving his danger, he in vain wished for immediate assistance; for, as he lived four miles from a town, two hours were elapsed before he could be visited by a surgeon, who found him complaining of a vehement pain and burning heat in his stomach and belly, an unquenchable thirst, with almost incessant efforts to vomit and go to stool. His pulse was full, and very quick; he sometimes talked incoherently, and had twitchings of the tendons.

The surgeon seeing this unhappy man in so dangerous a situation, and considering the improbability of his recovery without some powerful remedy, and recollecting the good effects which Dr. James's powder had often produced, by it's quick action in cleansing the first passages from bile, or any putrid irritating matter, he therefore resolved to give him a pretty large dose of it, hoping that it might speedily evacuate the poison. Previous to it's use, twenty ounces of blood were taken away, and he then swallowed two-thirds of a paper of the powder in a spoonful of sugar, drinking after it large draughts of warm water, in which bruised linseed had been infused. For a few minutes a profusion of bile was discharged, with some particles of the arsenic intermixed, as on examination could be plainly discovered; and he had presently several mucous stools, with an appearance of blood in them. He now thought himself rather easier; but notwithstanding the pain and other ill symptoms seemed to be somewhat mitigated by those evacuations, they shortly began to increase with greater violence, so that he was hardly expected to

live much longer; yet, as the last effort, half a paper more of the powder was administered, and soon after he fell into a profuse sweat. He again vomited up a vast quantity of bile, tinged with blood, which relieved him, and continued to evacuate by vomiting and by stools for more than four hours, till the liquids came up or passed through him unaltered. A gentle opiate was now given, to quiet, in some measure, the increased motion of the intestines, and repeated at proper intervals, as necessity required. He was ordered to take plentifully of good broth made of chicken or mutton, with fago or panada for his food, till his exhausted strength should be restored. Thus was this poor thoughtless man extricated from the most imminent degree of danger, and enabled in a few days to follow his usual employment.

CASE XI.

IN the passage of an East-Indiaman from Bencoolen to China, a seaman, aged twenty-five years, of a robust constitution, was seized, July the 7th, 1772, with the symptoms of a violent fever. He was first taken with a shivering, which was succeeded by a severe pain in his back and head. His skin was hot, his tongue dry, his pulse quick and very full, his breathing difficult, his eyes tinged with blood; he had been three days without a stool, was sick, and inclined to vomit. He was first blooded and purged, and afterwards vomited, by drinking camomile tea. He was then put to bed, and sweated freely, by the spirit of Mindererus and diluting drink. These evacuations were repeated as occasion required for six days, at the end of which time he was become comatose, and could not give a rational answer. A blister was then applied to his back, and cataplasms to his feet; the common substitute for Dr. James's powder, viz. tartar emetic

emetic and crabs eyes, was administered, which gently vomited, purged, and sweated him. This was repeated three days, but without the least amendment: on the contrary, he now became so delirious that he got out of bed, and placed himself upon the fore-castle, with an axe in his hand, swearing he would cleave any man that came near him. He was, however, secured, and tied down in bed; and in this situation the genuine Dr. James's powder was tried, at first for twenty-four hours in small doses, according to the printed directions for hot climates; but these producing no effect, and his recovery remaining very doubtful, a whole paper, or twenty grains, was administered. As this produced no operation, he took ten grains more an hour after, which gently vomited and purged, and threw him into a copious sweat. Soon after he went into a profound sleep, which continued for eight hours, though he had none for three days and nights before. He awoke perfectly in his senses, said he found himself very well, and begged to have something to eat. After this the use of the powder was discontinued, and the bark was ordered, which soon restored him to his strength.

C A S E XII.

IN August 1773, a gentleman of Gray's Inn being attacked with a violent pain in his thigh, which, after a few days, flew up into his head and shoulders, applied to two of the most eminent physicians in London, who attended him at different intervals for near five months. During almost the whole of this time, by the violence of the complaint, his head and shoulders were contracted together; he had severe pains and swellings in his ancles and knees, and his body was bent almost double; so that he was unable to undress himself, or even to turn in his bed. It frequently hap-

pened, after he had lain down half an hour, that he became in a manner stupified; so that when he wanted any thing, he could not express himself, and had been often obliged to be helped out of bed and seated in a chair, and to continue there all night.

On the 13th of January, 1774, after having repeatedly undergone the operations of cupping, blistering, and sweating, and taking variety of medicines by order of the physicians, with very little or no benefit, he determined to leave off all physic, and to submit to his disorder as patiently as he could; and he remained in the same miserable state till the beginning of the summer, when, as the weather grew warm, he found himself considerably relieved. He was still, however, never free from pain, and went to Scarborough in August, with an intention to drink the waters and bathe. After drinking the waters two or three mornings the complaint returned, principally affecting his left foot, so that he could not bear to put it to the ground. At this time he was advised by his friends to try Dr. James's powder; and seeing a gentleman (who had just published his remarkable case of nearly the same complaints) walking about healthy and well, the patient determined to apply to that medicine; though, from the common opinion that it was often attended with danger, he deferred taking it till he could have an opportunity of consulting Dr. James himself. After remaining at Scarborough a short time, he went to York, where he was confined several weeks, and was only able to go out twice in a chair. About the 20th of October, he reached London, and applied to Dr. James, who ordered five grains of his powder, every night, for a week, six grains for another week, and to continue it seven grains a night afterwards. He recommended for drink, at meals, Seltzer water, with a little hock or other white wine in it, and in other respects to live as usual. The first dose of the powder procured almost immediate relief, and he continued mending

mending every day afterwards. The operation of the powder was that of keeping the body gently open, and occasioning a perspiration in the parts affected, which seemed in a manner to dissolve the pain. The powder was pursued regularly for about a month or six weeks, when the patient finding himself tolerably recovered, saw Dr. James a second time, who advised him to take two or three of his analeptic pills of a night, which in a few days effectually restored him, and he has been perfectly well ever since.

C A S E XIII.

A Seaman, belonging to his majesty's ship *Levant*, aged about twenty-three, was taken ill in June 1769, of a malignant petechial fever, which was at this time raging on board that ship, the infection having been taken at *Porto Bello*, in the Spanish West Indies. The symptoms were at first a loss of strength and appetite; pulse quick and small, sometimes hard; a violent head-ache; a nausea and vomiting; strong vibrations of the parotid arteries; a drumming in the ears; pains in the back and loins; eruptions on the neck and breast, and sometimes all over the body, with an oppression of the breast; a dry cough; the breath hot and offensive; the extremities often cold; the face bloated; a raging delirium; the excrements green and foetid; the eyes full and heavy, with a pain fixed in the bottom of them; a vomiting of bilious and foetid matter; the tongue at first white, afterwards blue and discoloured. On the first day, six ounces of blood were taken away, and afterwards sixteen grains of *ippecacuanha* were administered and two grains of emetic tartar in two ounces of mint water. It was worked off with camomile tea; after which he had three fine stools, by means of a clyster composed of *Glauber's salts*, an ounce,

and some water-gruel. At night he was ordered to take two ounces of the common saline draught, to be repeated every third hour. On the second day, he had not the least remission; but the symptoms in general worse, the head-ache violent, and no sleep. The following mixture was now ordered, four spoonfuls of which were to be taken every second hour in the room of the saline draughts—Of the common emulsion, eight ounces; nitre, one dram; camphor, one scruple, dissolved in two drams of French spirit. At night six grains of the compound powder of *contrayerva* was added, and the clyster was ordered to be repeated. The third day produced no alteration; the fever much the same. A quarter of a grain of emetic tartar was now ordered every hour, with the saline mixture: it operated by stool, and scarcely any thing by sweat. At night the fever grew worse, and the patient was at intervals delirious. On the fourth day, all the symptoms of this dreadful disorder were apparent; and the surgeon well knowing the rapid progress of diseases in this country, and that the least delay was death, ordered the use of all the medicines to be laid aside, except the camphorated emulsion, and four grains of Dr. James's fever powder to be taken every hour. It had no visible operation for the first four hours, but the fifth time of the patient's taking it, he vomited a great quantity of bilious matter, and had about a dozen foetid stools; he sweated profusely, and the delirium seemed to give ground. The powder was now repeated every four hours. He slept about three hours this night. The fifth day, the delirium was quite gone; a fine remission, all the symptoms much abated, and some of the worst entirely vanished. The powder and emulsion were continued all this day, and at night the symptoms were entirely off. As the patient was now very weak and low, one dram of the bark was ordered to be taken

every hour in a glass of Madeira wine, and some of the same wine, diluted with saffron tea, for his common drink. He had no relapse, and in ten days returned to his duty. During the time that his delirium lasted, and the coldness of the extremities, a cataplasm of salt herrings, mustard-seed, and vinegar, was applied, which seemed to be of use. In the same ship seventy men had the fever, all of whom took these powders, and only two died.

C A S E XIV.

A Youth of nineteen, apprentice to a vintner in Covent Garden, contracted a fever at the Old Bailey in June 1748, being the same distemper of which the lord-mayor, judges, recorder, and many others died; and on Monday the 20th of that month, miliary eruptions began to appear on his arms, which the next day, Tuesday the 21st, disappeared; and though he sweated very much, his tongue became very dry, and he began to be delirious and convulsed; and on Friday the 24th, his tongue was black, dry, cracked, and sore, and he was excessively delirious, perpetually muttering something that could not be understood, and throwing off the bed-cloaths, could with difficulty be kept in bed, and was exceedingly convulsed all over. In this condition, about noon of that day, he took one full dose of fever powder, which gave him five stools. At night his tongue began to be moist and red, and he spake more intelligibly; but yet was, at intervals, delirious. He took half a dose more about nine, and it was repeated about four; but neither of these had any perceptible operation. On Saturday the 25th, about eleven in the morning, he took another whole dose, which gave him three stools. At night his tongue was much more moist and red; he was more sensible, and his convulsions much less

frequent and violent. That night he slept three hours, and sweated very gently. On Sunday the 26th, by eleven in the morning, his convulsions entirely ceased, his tongue became red and moist, he was very sensible, and in every respect so well as to be thought out of danger. The next day he took a gentle purge, which was repeated two or three times, and he recovered perfectly in a very short time.

These medicines are directed to be administered under certain regulations, and after some preparation, of which we think it necessary to give the following succinct account.

In strong and robust constitutions, and where the patient is young, it will be prudent to take away ten or twelve ounces of blood, but this only in the beginning of a fever, and not after he has been reduced and exhausted by the disease, when it might prove prejudicial. If the patient is costive, stools should be procured previous to the administration of the powders, either by common clysters, or by a tea-spoonful or two of lenitive electuary, half or three-quarters of an ounce of purging salts, or from ten to twenty grains of rhubarb; but these doses must be proportioned to the patient's habit, as it is only meant that his body should be opened, and not that he should be purged to any degree.

Each paper of the powder, of which there are two in every packet, contains about twenty grains; a third part, or one-half of this quantity, according to circumstances, is a dose for a grown person, which is to be administered to the patient in bed, in a spoonful of currant-jelly, or other jelly of fruit, barley-water, gruel, or herb tea, particular caution being taken that no part of the medicine is left in the spoon: during the operation the patient is to be kept warm, and drink now and then a draught of warm gruel, barley-water, common whey, balm tea, or any other thin

thin diluting liquor. If it produces any sensible operation, whether it be sickness, purging, or sweating, the medicine need not be repeated till the effect ceases, and then half or a third part of a paper, according to the case, is to be given in the same manner, and followed by the same management as before: if this second dose removes the feverish symptoms, and the patient sleeps freely, it is not necessary to give a third dose, the two will generally answer all the purposes intended; but if any remains of the fever appear, a third dose, equal in quantity to the former, should be administered, but not till the operation of the second has entirely ceased; and the like doses must be repeated till the desired effect is produced.

But if the first dose should have no sensible operation, a second should be given two hours after the first; and if this should produce no effect, two thirds of a paper, or even the whole contents of one, should be given six hours after the second dose; and this quantity should be repeated at distances of six or eight hours, till it acts by purging, vomiting, or sweating, or the fever disappears without either, which frequently happens; but the more plain and general direction is to give the half or third of a paper at first, and repeat the same quantity every six hours, till the feverish symptoms give way.

When it operates by purging, every possible precaution should be used to prevent the danger of the patient's taking cold in using the bed pan, for it is by no means safe for him to be taken out of bed: but though this caution is absolutely necessary after a medicine, which may be expected to excite a sweat, yet it is by no means meant, that the patient should be kept hot by a fire in his bed-room, or additional bed-cloaths; he should only be defended from the air, and the covering be somewhat warmer than if he was in health.

If little or no putrid bile is contained in the stomach or bowels, it sometimes happens that the largest doses of the powder will have no sensible operation; and in these cases, half a paper or even the whole, should be repeated every four or six hours, as has been before directed. But on all such occasions, it is requisite that a couple of stools should be procured in the twenty-four hours, either by a clyster, which is recommended as the best way, or by adding to every dose of the powder occasionally, so as to answer this purpose, from five to ten grains of rhubarb. Nor are we to conclude, that because this medicine neither purges, vomits, or sweats, it is therefore of no use, or prejudicial by its retention in the body; it is said frequently to produce a crisis, and cure the distemper, by the discharges of urine or insensible perspiration: nay, the ingenious inventor of this medicine is of opinion, that it sometimes acts so as to extinguish a fever by a specific quality, which can only be discovered by experience.

When fevers are attended with purgings, which are too violent, and yet cannot be stopped by opiates and astringents without danger, before the powder is administered a vomit of chicken-water is recommended, or a clyster of the same, to be repeated every hour till the purging ceases, and then to give the powder.

This chicken-water, which is also directed to be taken as a diluting liquor during the operation of these medicines, is made by stripping a young lean chicken of its feathers and skin, cutting it down the back, taking out the guts, and then, without washing it, boiling it eight minutes in seven quarts of water.

In case the body should be costive during the administration of the powder, a stool must be procured every day by a common clyster; but the utmost care must be taken that the patient is not exposed to take

take cold in the performance of this operation.

If the head is much affected in a fever, and the patient is delirious, stupid, or convulsed, this powder is generally efficacious in the removal of these dangerous and very troublesome symptoms; but in case the first or second dose should fail to calm the patient, and carry off these complaints, the following stimulating cataplasms are directed to be laid all over the feet, and renewed every six or eight hours till relief is obtained.

Take equal parts of bruised mustard-seed and horse-radish scraped—a small quantity of yeast, and enough of the sharpest vinegar, to form these ingredients into a cataplasm. At sea, or where horse-radish and yeast cannot be procured, a cataplasm may be made of pickled herrings bruised, with fresh-made mustard, and vinegar.

It is not necessary to repeat this medicine

after a fever is removed, on account of any languor or weakness that may remain; these effects of illness will soon wear off, without any other medicine than a gentle laxative in case of costiveness.

The doses must be proportioned to the different ages of children; three or four grains of it will be sufficient for an infant of two or three years old; and this quantity must be either increased or decreased according to age.

Dr. James left also another medicine, of somewhat similar composition, under the name of analeptic pills, which are recommended for rheumatisms, indigestion, crudities and flatulencies in the stomach and bowels, colics arising from any of these causes, bilious disorders, loss of appetite, and habitual costiveness: they are said to act as a gentle purgative, and not to require confinement; and many instances are given of their efficacy, and in particular in rheumatic complaints.

CHAP. IV.

Of Norton's, or Maredant's, Antiscorbutic Drops.

THESE drops, of which the sale is said to be immense, are probably an antimonial preparation of peculiar strength and activity; but as it does not appear that the composition of this medicine is known, or that it hath been analyzed by the faculty, we shall not venture to offer our opinion of it.

They are vended, and said to be prepared, by Mr. Norton, a surgeon, licensed by the corporation of surgeons of London; according to whose account of them, they are effectual in eradicating the leprosy, scurvy, old sores or ulcers, large blotches or boils, the king's evil, fistulas, piles, pimples, faces, long-continued inflammations of

the eyes, bilious colic, Saint Anthony's fire, scorbutic gout and rheumatism, and all other disorders arising from foulness of blood.

He likewise asserts that they perfect digestion, create an appetite, strengthen the stomach, and act as restoratives to the most reduced constitutions.

Mr. Norton also informs the public, that these drops may be taken by those of the most delicate constitutions, without the least confinement or hindrance of business, and without any danger of catching cold; and that they may be administered with safety to infants, children, and women in a state of pregnancy.

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The proprietor also recommends them for the removal of such disorders as are the consequence of inoculation, and for such ulcers as have been of so long continuance as to affect the bones and endanger the limbs.

An infinite number of cases are published in proof of the variety of virtues attributed to this medicine: and, indeed, if forty thousand bottles of it are annually sold, as is generally reported, it would be extraordinary if some of the patients should not escape from their diseases; and as it may be supposed those who take this medicine are persuaded of it's efficacy, it is natural to conceive, that such of them as regain their health will ascribe their recovery to the remedy in which they have placed their confidence.

But as we do not mean to insinuate censure without proof, and are not furnished with any cases in which this medicine has proved particularly prejudicial, we shall add a few of the cases in favour of it, and leave our readers to form their own judgments.

CASE I.

A Youth having been seized with a most violent fever, a profuse perspiration, with a total loss of appetite, succeeded it, which was followed by a number of very large swellings upon both legs, one thigh, and on his head, which after some time broke, and emitted a great quantity of matter, so that he was almost deprived of the use of both his legs. In this dangerous and emaciated condition, several of the faculty were applied to without benefit, and he was at last pronounced incurable. It was at length, however, determined to make trial of Norton's drops, as the last resource, by which he obtained a perfect cure. It is above three years since he discontinued them, and he is now as sound and healthy as he was previous to his indisposition.

CASE II.

A Poor woman of Pendleton, near Manchester, Lancashire, was in a most miserable emaciated condition, and so very lame that she could scarcely move with the assistance of a crutch and stick; her lameness was occasioned by a violent scrophulous disorder in her right thigh, with which she had been so afflicted for nine years, that her limb was contracted, and she had sixteen running sores in it, which reduced her to that state of weakness. For above a year she was assisted with every medicine, prescribed by some very eminent of the faculty, without success. Norton's drops were then administered, by which her health was restored, all her wounds perfectly healed, and her limb rendered as useful as the other. It is above two years since the cure was effected, so that she is now able to maintain herself and children by weaving, her husband being in the army at Jamaica.

CASE III.

A Woman had been long subject to the scurvy, which about two years since terminated in a violent eruption on her face and right-hand, attended with a running humour of a most foetid smell. In this situation, so distressing to herself, and disagreeable to her friends, she consulted two gentlemen eminent in their profession, whose directions she followed without the least benefit. But being induced by cures advertised in the Salisbury Journal, to try Norton's drops, from the first three or four bottles she found relief; and by continuing them to nine, every disagreeable symptom vanished: since the cure (full sixteen months) she has been entirely free from any complaint, and now enjoys a perfect state of health.

C H A P. V.

Of the Ormskirk Medicine for the Cure of the Bites of Mad Dogs.

THIS medicine is said to be the discovery of a Mr. Hill, of Ormskirk in Lancashire, from whence it has obtained the name by which it is at present principally known.

The composition of this medicine has been hitherto kept a secret by the proprietors though it is apprehended to be somewhat similar to the Tonquin or Chinese prescription, which we have given in a former part of this work.

Though it has in some instances failed of success, (and particularly in a very melancholy case, which we have given at large, under the head of diseases occasioned by the bites of mad animals) yet, as the proprietors do not make any claim to infallibility, and as several cases are adduced in proof of it's efficacy, we do not think the use of it ought to be neglected, more especially as no medicine hath ever yet been offered to the public, which can be deemed a certain cure for this dreadful malady.

It is made up in proper doses, one of which is to be taken in a tea-cupful of red wine and water, in the morning fasting; the patient is directed to remain without eating or drinking for three hours after taking the medicine, and then to live as usual, avoiding all excess of liquor, for a fortnight or three weeks after.

The medicine should be taken as soon as possible after the bite has been inflicted; and where the injury is received in the hands or face, if it is administered within three days, and where other parts of the body have been bitten, within one week

after the accident; one dose is held to be sufficient; but if any patient chuses for farther safety to take a second, it should be given the third or fourth morning after the first: but if longer times have elapsed than those we have just mentioned, if the wounds are large or deep, or the unfortunate patients have received more than one in different parts of their bodies, the repetition is said to be absolutely necessary, and even more than once, according to the distance of time, and the circumstances of the wounds.

Children of three years old are directed to take half a paper as a dose; from that age to eight, two thirds of a paper; and from thence upwards, the whole: and patients are advised not to bathe either in the sea, or otherwise, for a fortnight after taking it.

This powder is asserted by the inventor and proprietors, to be perfectly innocent. It produces no sensible operation of any kind.

The cases which the proprietors have published, in which these medicines have effected cures, after the symptoms of canine madness have actually appeared, are so few in number they are contained in the hand-bills, wherein these preparations are inclosed; yet as they appear to be well authenticated, we shall subjoin one of the most extraordinary, by way of information to such of our readers as may be inclined to try the efficacy of the medicines, in case they should have the dreadful misfortune of being bitten by a mad dog, or other animal in the same situation.

CASE.

C A S E.

A Woman servant, aged twenty-two, of an healthy constitution, in December 1767, was bit as she returned from milking, by a dog which had every appearance of madness; her heel, where the wound was inflicted, became black and painful; but as she was soon going to a new place, she concealed the bite, lest it should be a prejudice to her. About a fortnight after she got to it, and a month from the accident, on being told to take some milk off the fire (before which a dog lay) she said she could not do it; and on being repeatedly urged to it, she confessed the bite, and how much she was now agitated at the sight of a dog: this happened on Sunday; she kept seemingly well till Thursday morning early, when she was seized with a violent giddiness, and would have fallen, had not a man held her up for near half an hour; she neither eat nor drank any thing that day or Friday, but concealed her disorder from her mistress till about eleven on Saturday morning, and then came to her, complaining exceedingly; said she felt as if she could fly; was extremely thirsty, but could not drink; had been three times to the beck, or small river near the house, but had come back without water: the pain in her head was intense, and her face red like scarlet; her eyes uncommonly fierce and distorted; she was much agitated, and violently hot; sat in every chair in the room, and rose again immediately; she then became quite delirious, and the consternation of all about her was exceedingly great, as they were at a loss what course to take. Some company coming to see her mistress in the afternoon, she burst into the parlour

and sat herself down in a chair. Some one then recollecting that this medicine was kept for the use of the poor by a person in the town where she lived, he was immediately sent for, and she was held in her place till he came. As she had refused drink from the Thursday before, and even coffee (of which she was remarkably fond) it was with the utmost difficulty that the medicine was administered, her head starting violently back when an attempt was made to give it; but by holding her head, and forcing it into her mouth, it was at length accomplished: she was then put to bed, and held in it most part of the night; had water offered her, but she would not drink, though she complained of thirst; her flesh burned much, her eyes were fixed, but could bear no light; she started frequently, and did not sleep; but growing rather easier towards morning, had another paper of the medicine given her, which was taken with less difficulty; this brought on a pretty violent sweat, and a short sleep, ever after which she grew gradually better, her senses returning so perfectly on Sunday afternoon, that rising from her bed, and seeing a cake baking at the fire for the children, on which some ashes had flown, she called some one to blow them off, expressing her fears that her breath might hurt them; but had no remembrance of what had befallen her during the time of her delirium, only that she was desirous to do mischief. She took no other medicine, food, physic, or diluting liquor; was neither bled, blistered, or had any other means used. The wildness in her eyes did not go off for near two months afterwards, but she was in other respects well, and continued so.

C H A P. VI.

Of Ward's Drops, Pills, and other Medicines.

THESE medicines, during the life of the original proprietor, were so highly celebrated as to enable him not only to live in great splendor, and to amass a considerable fortune, but to exercise many acts of uncommon benevolence, and to assist the poor with money as well as drugs and advice; but whether the manners and conversation of Dr. Ward himself, added energy to his medicines, by contributing to the faith of those to whom they were administered, or whether the manner of preparing them is less understood by his representatives, or from whatever cause it arises, certain it is, that the fame of their efficacy has decreased very considerably since his death; and we apprehend, the profits on the sale of them contributes but little at present, towards the support of those charities to which it is appropriated.

The *White Scurvy Drops*—one third part of an ounce of which are sold for one shilling, are recommended in the disorder from whence they take their name, and are said to be excellent purifiers of the blood in all scorbutic cases.

They are also prescribed to bring off worms from children, and to remove obstructions, particularly those peculiar to the female sex; to act as a cooling medicine in the disease called St. Anthony's fire, and other inflammatory complaints; and in removing pimples in the face, and other eruptions on the skin, in different parts of the body; and as an excellent anti-venereal in all stages of that disease.

When they are to be administered internally, two drops are directed to be put into a jill-glass, two third parts of which are to be filled with pump-water. This

dose is to be taken at bed-time, three successive nights, then omitted three nights; and after that repeated again three nights; and this course is to be continued till the whole bottle is used. One drop is a child's dose.

They are to be used externally, by wetting the top of the finger in them, and applying it once or twice to the part affected: and in the same way they are said to cure the scurvy in the gums.

These drops are avowedly a mercurial preparation, but are asserted not to contain more than half a grain of mercury, in the two drops ordered for a dose.

The *Red Pills*—six of which are sold for sixpence, are directed to be administered to children and young people in the spring and fall of the year, to prevent worms, coughs, eruptions, and other disorders, to which they are usually subject, keeping them healthy by carrying off internal foulnesses.

They are also highly extolled for rheumatic pains, and other aches in the limbs; for boils and ulcerous sores; for obstinate venereal diseases; and in many other chronic cases: they are directed to be taken for a considerable length of time in the following manner. Bruise a single pill, and give it in a spoonful of any liquid, two or three times a week, in the morning, before any thing else is received into the stomach: its operation is sometimes by stool, and sometimes by vomit, according to the nature and seat of the disease. In either of those cases, it should be worked with thin water-gruel, or warm water, between each motion; if it excites perspiration, the patient is to keep himself warm, and encourage it by

by diluting liquors. Milk, greens, and fruit, are to be avoided on the days when this medicine is taken.

This is an antimonial preparation; and, from it's visible effects may be somewhat analagous to the London fever powder, or Dr. James's powder.

The *Emetic Sack-Drop*—at sixpence for half an ounce, is recommended as efficacious in the same diseases as the Red Drop; it is said to be easy and effectual vomit, and to operate in that way without exciting troublesome and disagreeable twitchings: the half ounce bottle is the dose directed, to be lessened according to age and other circumstances; but it sometimes acts as a purgative. When it vomits, half a pint of gruel or warm water may be given when the sickness indicates an inclination to retch, and this may be repeated as often as the sickness occurs.

The *Sweating Powders*—fifty grains for four-pence. Half this quantity is directed to be taken as a sweat, which it is said to excite in a very agreeable way, by easing the patient's pain, and raising his spirits, in all rheumatic cases, pains in the body and limbs, in coughs, and other disorders occasioned by colds.

These powders are ordered to be taken as the patient is going to bed, where he is to lie between the blankets, and drink frequently and moderately of white wine whey, or any other weak warm diluting liquor, and the sweating is to be encouraged by warmth and lying still. If the half paper does not raise a proper degree of perspiration, three quarters or the whole contents of one may be given the succeeding night, and either of the doses, as they appear to answer the purpose, may be repeated every other night, and continued either with the same or greater intervals, as long as shall be necessary, or they agree with the constitution.

The *Paste for Fistulas and Piles*—is sold in tin boxes, containing a pound each, at two shillings and ten pence. This paste is said

to be highly efficacious in these disorders, and others incident to the same parts of the body, and to be an antidote against the gravel, spleen, and internal soreness of the stomach or bowels.

The size of a nutmeg is to be taken three times a day, in the morning fasting, between breakfast and dinner, and at night, at proper distances from the meals, drinking after it a glass of wine and water, or water alone.

The *Liquid Sweat*—half an ounce for one shilling, is recommended for pains of the body or limbs, fevers, vomitings, gripes, complaints in the head, and female weaknesses. The dose is from sixty to a hundred drops, taken in a glass of good white wine, and the patient is to lie between the blankets, and promote the sweat by warm liquids; he is also cautioned to avoid the danger of getting cold, by going out too soon after this operation.

The *Dropsey Powders*—six papers in a parcel, for sixpence. These powders are said to be not only serviceable in dropfical complaints, by causing an evacuation of the water in the belly, but to be useful in the jaundice, overflowing of bile, and retention of urine, promoting the passage of the water.

From thirty to forty grains are directed as a dose to be taken in warm broth or beer, for two or three days together, or for a longer time, with proper intervals, according to the circumstances of the case.

The *Essence for the Head-ache*—half an ounce one shilling. This essence, it is said, was never sold by Dr. Ward in his life-time; it is recommended in pains of the head, in which it is asserted to give immediate relief, and for continued aches in the limbs: a small quantity of it is to be rubbed on the palm of the hand, which is then to be applied to the part affected, and held till it is dry; and this is to be repeated two, three, or four times, unless the pain is relieved by fewer applications. It was with this essence that Mr. Ward removed a violent fixed

pain from the upper-joint of his late Majesty's thumb.

From the reputation which these various medicines obtained, it is certain that they

were in some cases successful under the administration of Mr. Ward himself; of late years they do not appear to have been in great use.

CHAP. VII.

Of the late Sir John Hill's Medicines.

THESE are chiefly prepared from vegetables; and if the botanical writings of the preparer of them have entitled him to reputation, it may be presumed he would not forfeit it by obtruding on the world compositions different from the accounts given of them by himself, and warranted to be genuine.

It would exceed the bounds of our undertaking to enter into a minute discussion of the virtues and efficacy of these several medicines; all we can attempt is, to extract from the inventor's publications the natures of the several complaints for which he prescribes them, and the manner in which he directs them to be administered.

Pectoral Balsam of Honey, for coughs and consumptions, asthmas, hoarseness, defluations, catarrhs, all phthisical complaints, difficulty of breathing, and a tough morning phlegm.—It is recommended as the greatest of all preservers of the lungs, and said to possess the virtues of honey and the richest balsams, and never to disagree with the stomach. A tea-spoonful is a dose; to be taken morning and evening in a wine-glass of water. It is said to convert the water into a pleasant balsamic liquor, perfectly like asses milk in colour, taste, and virtues; to be as restorative as asses milk, and to have the addition of this healing balsam. It may be taken at all times, to take off fever, recruit the strength, raise and

refresh the spirits, clear all obstructions of the breast and lungs, and to cure a common cold in a few hours. No particular rules of life are required, only weak persons are to take smaller doses; in all colds, warm weak liquors, drank in plenty, are recommended; to avoid suppers; and, in full habits, bleeding; in consumptions, air, and exercise on horseback.

Essence of Water-dock—It has been affirmed, that the water-dock root is an absolute and certain cure for the scurvy; and the inventor of this medicine doubts if there ever was an instance, when it has been fairly tried, in which it failed. He says the great virtue of the root lies in it's inner rind, of which this essence is a perfect solution. A tea-spoonful is a sufficient dose; it is to be taken twice a-day in a wine-glass of water, or in an infusion of the dock-root itself, where that can be had, which still increases it's virtue. It must be continued for a considerable time, and the person is all the while to avoid high-seasoned foods, and use moderate exercise.

Elixir of Bardana, for the gout and rheumatism.—The author does not pretend to prevent the returns of the gout; but to relieve those who suffer, to reduce the number, and shorten the continuance of the fits, and to alleviate the pains of them, by this medicine. In the rheumatism it is recommended as a safe and absolute cure; the dose, a tea-spoonful, in a wine-glass of water,

water, night and morning. Its operation is by perspiration and urine.

The *Tincture of Centaury* is prescribed as a great stomachic bitter, that gives a healthy appetite, and sound digestion; strengthens a weak stomach, prevents wind and swelling, and never fails to cure retchings, loathings, and sickness after meals; to take off that faintness, weakness, and weariness, which proceeds from indigestion; and give in their place strength, spirits, and cheerfulness; to cure the heart-burn, dryness, and an ill taste in the mouth, an offensive breath, and rising in the stomach after meals, heaviness of the head, and flushings in the face.—The dose is a tea-spoonful, to be taken an hour before dinner, and at night going to bed, in a wine-glass of water.

Genuine Tincture of Valerian, made from the true heath valerian-root, is described as a pleasant, cordial, and enlivening medicine; good against all nervous disorders, fits, head-aches, weakness, heaviness, and lowness of spirits, dimness of sight, vapours, and melancholy; convulsions and hysteric complaints; epilepsies and paralytic disorders; as also against sickness of the stomach, and flatulencies; obstructions, and the convulsive asthma.—The dose one table-spoonful in a large glass of water, once, twice, or three times a day. An hour before dinner, at seven in the evening, and at night going to bed; using exercise, and avoiding suppers.

Volatile Spirit of Feverfew—The dose forty, fifty, or sixty drops, in half a jill of water, twice a-day. The author recommends it to cure the most settled head-aches by a continued use, and to take off the pain in those less fixed, in a few hours; against epilepsies, lax nerves, trembling, heaviness, and slowness of speech, with coldness of the limbs at some times, and tinglings of the flesh at others; defect of memory, accompanying an habitual head-ache, with shiverings, faintings, and convulsions, especially if advanced toward the decline of

life; and blindness or deafness, which also sometimes follow habitual kinds of head-aches. It is said to be a medicine of power, and therefore the dose should not be increased; but may be repeated to three or even four times in the twenty-four hours, if there be urgent occasion. Bleeding is always needful where there is fulness; it will be proper to purge once a week with any of the purging waters; and the patient is to use exercise, drink little wine, and avoid high foods, passions, or great study.

Carline Tincture, for a wandering gout, and for strengthening the stomach and opening obstructions.—A tea-spoonful in a wine-glass of water is a dose; it is best taken with the breakfast, and with the afternoon's tea; is not at all unpleasant, and the author says it prevents the ill effects of tea: and used thus in the morning, takes off any offensive scent in the breath; and, by washing the mouth with it, with warm water, fastens the teeth, and cures the scurvy in the gums. It is also said to be stomachic and aromatic, good against wind, to destroy worms in children, and in the flying gout; and, though no astringent, cures dysenteries.

Veronica, or Speedwell Drops, for strengthening weakened constitutions, impaired by long illnesses, hurt by too free living, or arising from ill-cured diseases.—It is recommended to open gradually obstructions of the internals; and restore them, so far as can be done, to their former tone and strength. To assist weakness, anxiety, and pain, and raise the spirits, without heating the body; to relieve those who have dry skins, with flushings in the cheeks; heat after meals, and sudden sweats; dry tongues, weak pulse, and high-coloured urine; with weakness and wasting; no relish for food, nor refreshment from sleep; who have weakening discharges, deep coughs, and night sweats. The dose ordered is fifty drops, in a wine-glass of water; to be taken three times in the twenty-four hours:

last

last at night, with breakfast in the morning, and half an hour before dinner. The patient is advised to change the air, and drink cows, asses, or goats milk; to avoid high fauces, reduce by degrees the quantity of strong or fermented liquors he is used to drink; eat little supper, go early to bed, rise betimes, and use exercise but not to fatigue; and never omit one dose of the medicine during the course.

Balsamic Tincture of Agrimony, prescribed to cure all degrees of the jaundice; the pale, the yellow, and the black: and other disorders owing to a distempered state of the liver, to overflowings of the gall, or to obstructions, whether arising naturally, from ill-cured fevers, or great quantities of bark; to promote a regular formation of gall in the liver; and secure a due discharge of it into the intestines, and to take off that yellowness of the skin which remains after many distempers.—When the herb can be had in perfection, it may be made into tea: or the virtues may be doubled by taking the tincture in that infusion. The dose is a tea-spoonful night and morning, in a wine-glass of water, using exercise, and keeping the body open.

The *New Canadian Balsam*, or *Strengthening Drops*—They are perfectly innocent, not disagreeable to the taste; and are recommended to remove weaknesses and exhausting drains of all kinds, from whatever cause, and to strengthen the stomach, the back, the weakened organs, and the whole constitution. The dose is forty or fifty drops at night going to bed, and at twelve at noon in a glass of water. In some cases the use of a cold bath is said to be necessary to compleat a cure; but there are numerous instances where this medicine has done without that assistance.

Tincture of Sage, for those who begin to feel the effect of years; for the cure of tremblings, difficulty of hearing, dimness of sight, giddiness, numbness, sleepiness, lowness of spirits, and those other com-

plaints which usually attend an advanced life.—This is described as pleasant, innocent, and effectual; and reported to continue health and spirits to the extreme of life; and to prevent those ills, which too often would cut it off before it's time; to preserve the faculties and memory; to warm the heart, strengthen the stomach, and restore lost appetite. It is also offered to prevent all the disorders that attend a sedentary habit; to relieve instantly, in faintings, and every kind of discomposure, and in the head-ache; numbness of the limbs, hardness of hearing, dimness of sight, giddiness of the head, sleepiness, stiffness, and tremblings. The dose is a tea-spoonful, twice a day, in a wine-glass of water, or of wine alone. It may also be taken in tea, whenever that is drank, or occasionally on a lump of sugar.

Red Speedwell Drops, for heats and redness in the face.—They are said to be prepared from the herb, red speedwell; assisted and improved in virtue by whatever is most to be depended upon for the removing this troublesome complaint: and are recommended as pleasant, stomachic, aromatic, and reviving; being cordial without heat, and always giving relief in those low spirits, which come on if the humour is at any time thrown back; to help the appetite and digestion; to prevent sickness after meals; and to open obstructions of the liver, which are often the real causes of heats in the face. They operate gently by urine, and are to be taken fifty drops in a wine-glass of water, at night going to bed; and the same an hour before dinner. The patient is directed to eat no bacon or salted meat; no mustard, vinegar, or pepper; little spice, salt, and gravy; and to take weak wine and water as the common drink.

Essence of Restharrow, for the gravel and stone.—The bark of the fresh root is said to contain all the virtue of the plant; and that those who will take the pains to make a tea of it, will need no other preparation: only observing

observing the great caution of having the root genuine; and that six drams of the bark of it is to make a quart of the tea. For those who doubt, or cannot get the root, this essence is prepared: a tea-spoonful of it has the virtue of six drams of the fresh bark of restharrow; and if taken in a cup of barley-water, will have all the same effects, no more or less. A quart, or more, of barley-water, should be drank at several draughts after it, that there may be the same diluting as with the tea; and the dose may be repeated at eight hours distance. It is asserted to soften and cleanse the passages, to cause a great and easy flow of urine, and bring down the gravel and small stones with less pain.

American Balsam, for the colic—to strengthen the stomach; open all obstructions; to cure the rheumatism, gravel, colic, jaundice, and all kinds of weaknesses; for the hypochondriacal disease; headaches, coughs and consumptions; for catarrhs, sore throats, and asthmas; hectics, and wasting of the flesh; and for persons who have lax fibres; to strengthen the brain, assist the memory, and remove barrenness; and as a cure for lowness of spirits. The dose is forty, fifty, or sixty drops, in a tea-cup of water, at night, going to bed, and at twelve at noon.

Lettuce Juice, to serve the purposes of laudanum, without it's danger.—This juice, the author insists, possesses the virtue of opium, but has not it's disgusting taste, ill smell, or mischievous effects; and that taken at night it gives rest, in the day-time ease and cheerfulness; that it eases pain, is good in disorders of the stomach and bowels, and a safe and ready cure for common head-aches and low spirits. The dose forty drops; but it may be increased to double that quantity; and may be taken twice a day in a wine-glass of water, or of wine. It may also be taken in tea.

Tincture of Spleenwort, for a cure of

hypochondriacal disorders.—The dose a tea-spoonful in a wine-glass of water twice a day; two hours before dinner, and at night going to bed.

Tincture of Polypody, for a family purge.—A tea-spoonful in a glass of water is a dose: it is said to operate within an hour or two after taking; and that without the least uneasiness, griping, or sharpness. When the stomach is over filled, or any thing disagrees with it, or when the bowels are swelled with wind, the pain is said to cease as soon as it is swallowed; and the cause to be presently after removed, without trouble. It is also recommended in habitual costiveness; in cachectic and hypochondriacal cases; in obstructions of the mesentery; and to reduce corpulency. It's operation may be increased to any degree at pleasure, by taking a larger dose.

The *Worm Tincture*.—A few drops, taken once or twice a day, are prescribed to destroy worms, and clear the bowels of that slime which gives them origin; and to strengthen the stomach and intestines, so as to prevent more being produced. Four drops, in a spoonful of water, is the dose for a child of two years old; and two drops more, in more water, for children every year older to ten: those of ten years old may take twenty-five drops; and then add three drops to the dose for every additional year to twenty; after which time, and for all grown persons, sixty or seventy drops are the proper quantity. A single drop may be given to an infant in the month. It is to be continued for some time; and during the course a common purge is directed to be taken once in a week.

Liquid Extract of Hemlock, for cancers.—Twenty-five or thirty drops, are directed to be taken in a wine-glass of water, sweetened with a small lump of sugar, at night going to bed, and at eleven in the morning; and to be increased to forty; or a few more, after some days continuance.

The body to be kept open by any gentle phyfic.

Alædarian Drops, for disorders of the stomach, and chronic diseases; and for strengthening broken constitutions, and softening the decays of age.—To be taken from twenty to a hundred drops twice a day, in a wine-glass of water.

Petastie Powder, for the cure of fevers.—It is sold at three shillings the six papers. One paper is a dose: it is to be taken at night, in a cup of baum or sage tea; and, if there be occasion, again in the morning, and at the night following. The author says, a slight fever, taken in time, is commonly cured by the first dose: but where the case is more obsti-

nate, it is to be taken every eight hours. If the patient's stomach be oppressed or foul, a vomit is to be given in the beginning of the illness. If full of blood, he is to bleed. In all cases he is to be put to bed, and kept perfectly quiet; and a basin of baum or sage tea taken every hour or two. No solid food is to be eaten, only panada, or the like. The body is to be kept open by a clyster of water-gruel, with a little oil and coarse sugar, every morning. The air of the room to be often refreshed, and the patient kept warm, but not covered too hot, or shut up too close in the bed; the purpose being to keep up a gentle perspiration, not a violent sweat.

C H A P. VIII.

Of Dr. Anderson's Scotch Pills, and Speediman's Pills.

THE former of these medicines is in general a safe, but somewhat rough purge; the principal ingredient in the composition of *Anderson's Pills* being aloes.

The venders of these pills recommend them for diseases of the stomach, head, and belly; to destroy worms in the intestines, to relieve habitual costiveness, and particularly of pregnant women; for those pains in the head which proceed from vapours of the stomach; for blear eyes, constant thirst, and paleness of countenance; for the stone, scurvy, colic, dropsy, green-sickness, and paralytic complaints; for catarrhs, gout, rheumatism, and defluxions in the joints.

They are directed to be taken going to bed, though it is said they may be used at any time: and the ordinary dose is from two pills to four; though in weak constitutions, easy to work, a single pill sometimes answers the purpose.

In cold habits, these pills may be as use-

ful as any other common purge; and as the quantities are determined, they may be a safe dose for those who do not consult a medical practitioner on slight indispositions: but we cannot attribute to them all the virtues with which they are honoured by those who are interested in their sale; the utmost merit we can allow them is, that they may be beneficial to persons of strong constitutions, but should be taken with caution by such as are sickly, weak, or infirm.

Speediman's Stomach Pills, are recommended for loss of appetite, wind in the stomach, obstructions in the bowels, heart-burn, palpitation of the heart, costiveness, colics, cramp, and vomitings; and one, two, or three of them are directed to be taken at any hour of the day or night.

They are also prescribed as the best phyfic for such gouty people as cannot bear exercise or cold purgatives, for removing the obstructions of females, and at certain periods of their lives; for travellers, and such

such as being subject to vicissitudes of weather, are liable to disorders in their stomach or bowels; it is also asserted, that no medicine procures sleep so readily, or so effectually relieves the restlessness occasioned by a loaded stomach, or eases the bowels and stomach so soon after sea-sickness.

These pills are also said to be preventives of jaundice and dropsy, by producing good blood, and removing obstructions; to have sovereign power in relieving costive habits, and to be used with success in windy ruptures.

But our readers will judge with how much truth this amazing catalogue of virtues is ascribed to Speediman's pills, when we inform them, that they are a composition of powdered rhubarb and the flowers of camomile dried and powdered, the whole brought to a proper consistency by the help of some syrup, or other viscous fluid.

Nor by this account of the ingredients of which Speediman's pills consist, do we mean to depreciate their value: we have no doubt but they are perfectly innocent; and that in slight disorders of the stomach they are actually useful.

We have now noticed the principal medicines which are advertised for sale, and which are therefore usually deemed articles of quackery, though we have already given our reasons for excepting some of them from this general charge; the vast variety of others

with which the public is daily importuned to root out the very existence of disease, are either common prescriptions wrapt up in mysterious secrecy, or dangerous preparations of powerful drugs, unskilfully compounded; and improperly proportioned: in the former case, should any man apprehend himself benefitted, in all probability "His faith hath made him whole;" in the latter, the patient and the disease go off together, and the patient's friends are consoled with assurance that the cure would have been certain, if the application had not been too late; an apology which serves equally at every stage of indisposition.

It would be descending too low, to mention those itinerant physicians who vend their advice and their drugs in fairs, markets, and at the corners of streets; who, scorning to depend on written testimonials, bring the same patients to attest the same cures a hundred times repeated; and modestly collect from the public contributions under the name of *charity*, for their mercenary band of pretended sick, lame, and blind. Nor would any arguments we could offer have the smallest weight with those whose credulity and ignorance can be duped by such weak and shallow pretences; this is another of the medical grievances which requires the interposition of the legislature, which has annexed ignominy to the crime of self-murder by poison, but suffers others to administer it indiscriminately, publicly, and with impunity.

BOOK X.

Of sudden and violent Accidents.

CHAP. I.

Of the Appearances of Death.

WHEN by any sudden or violent accident the functions of life have been suspended, and the human body has assumed the appearance of death, it has been too long the custom to consign it to the grave, without the smallest endeavour to call back the unhappy victim to life, or to restore the action of those organs, which, though they are impaired to such a degree as to be for a time imperceptible, may in many instances be awakened into motion, and a valuable life preserved to the community at the expence of a very little trouble, and with the assistance of a very small matter of medical, or rather of practical knowledge.

But the humanity and benevolence of the more enlightened physicians and medical practitioners and writers of the present age, have at length prevailed over the superstitious stupidity which opposed the efforts of reason and mercy; and instead of the church-yard or the charnel-house, the bodies of such as meet with sudden accidents, are now conveyed to warm beds, attended with care, zeal, and skill, and such attempts made to prevent their misfortunes from being fatal, that scarce a day passes in which some unfortunate person is not snatched from the jaws of death, and restored to his family, his friends, and the commonwealth.

Nor have the most laudable endeavours been wanting to promulgate the means by which ends so desirable may be attained; a society at first instituted by the animated zeal

of a private individual, has become so numerous and extensive, as to establish correspondences with the learned, the liberal, and the ingenious, in every part of Great Britain, to form a general system of œconomy for the preservation of the human species from untimely death, and to confer honours and rewards on those who shall assist in so meritorious a work.

Under the auspices of this association, very emphatically denominated a *humane society*, the recovery of the apparently dead has been attempted with surprizing success; endeavours are used in the earliest moments that they can be applied, and continued whilst even a possibility of hope remains; the fluids are prevented from growing cold, by baths, frictions, and coverings of warm cloths, sand, ashes, or salt; and endeavours are used to reanimate the organs of life, by introducing into the intestines and lungs air, smoke, and other stimulatives.

But, as a physician of another country has, with equal humanity and ability, pointed out the means which are most likely to contribute to the preservation of life in a great variety of exigencies, we shall follow him as our principal guide in treating distinctly of these circumstances, adding to his observations and directions, such remarks as have occurred in the course of our own practice, and such as we have been enabled to gather from the very ingenious writings of our own countrymen on this very interesting and important subject.

C H A P. II.

Of Strangulation occasioned by the Stoppage of the Passage into the Stomach.

MANY fatal accidents have arisen from bodies of too large a size, or of pointed forms, and unequal surfaces, having passed into the gullet, and being detained there either by the narrowness of the passage, or by sticking or adhering to the sides of it: most of these accidents are occasioned by carelessness either in chewing animal food, fruit, or other hard substances; by haste in feeding, especially on fish, or the smaller kinds of fowl; by putting pins, needles, nails, and other pointed instruments, in the mouth; and above all, by talking in the act of eating such dangerous food as we have already described, or with such instruments in the mouth: we have ourselves been witnesses of sudden death occasioned by swallowing a nut-shell in the eagerness of answering a question without clearing the mouth.

Plain directions, easily followed, would answer the purpose of obviating these dangers; let the meat be always well chewed, and this indeed is necessary to facilitate digestion, as well as to avoid strangulation. Let no improper substances, or pointed instruments of any kind, be introduced into the mouth; let no attempt be made to speak till the mouth is perfectly emptied; and let those who have voracious appetites, or are particularly affected with hunger, avoid fish, and other food which contains small and pointed bones: in England, fish is generally served as the first dish; and to those whose appetites are keen, it is certainly a service of some danger to attack it; the soup and boiled meat of other countries seem better calculated to allay the violence of hunger with safety.

But when, from neglect of these precautions, substances are actually fixed in the

passages, speedy means must be taken to remove them, which can only be done by extracting or forcing them down; the former is most adviseable, but is not always practicable; whenever it is, it ought to be preferred to charging the stomach with a substance, which, in it's various passages, may produce inconvenience and danger in the intestines: if the passage is merely choaked by unchewed meat, the most expeditious method is, to thrust it down, which may be done without hesitation, as no ill consequence can happen from it; but if the stoppage is made by fish-bones, pins, needles, or other sharp-pointed or uneven instruments of metal, wood, or other hard substance, every endeavour should be used to extract them by the mouth.

To this end, the fingers should be first tried; after these, nippers, or those forceps which open in different divisions, and are commonly used by surgeons to extract balls and other substances out of gun-shot wounds.

If these endeavours fail, which will frequently be the case if the stoppage is low in the gullet, and the matter which occasions it is of a smooth or slippery surface; a kind of hooks or crotchets are recommended, which may be instantly formed of a piece of iron wire of proper strength, bent at each end in contrary directions, the one end to be let down the throat with the flat of it towards the outside or front of the neck, and the other curve to serve as a handle, and to be secured with a string, to prevent the instrument itself from descending too low, and increasing the mischief it is intended to remove; when this hook is introduced, it must be carefully and judiciously raised and lowered till it lays hold

of the offending substance, which it will in most cases extract; for if it is a large body, and the crotchet once gets below it, it will certainly be raised; and if the obstruction is occasioned by a needle, pin, fish-bone, or other hard-pointed substance, sticking across the gullet, the instrument in its return will seize it by the middle, and either break, bend, or disengage it.

To extract lesser bodies sticking in or adhering to the sides of the gullet, and not obstructing the whole passage, another instrument is advised, composed also of a long piece of wire, the middle part of which is to be bent into a circle or ring about the size of the gullet; and the straight sides of the wire being brought together to serve as a handle, the ring may be introduced into the throat, and gently moved about till it lays hold of the obstructing body. Rings for the like purpose may also be formed of leather, silk, or even packthread well waxed to stiffen it and give it a smooth surface; one of these may be fastened to a piece of wire or whalebone, and then conveyed into the throat: and these flexible rings are in some cases to be preferred to those of wire, as a turn of the hand, after they have once laid hold of the substance, will effectually secure it, and enable the operator to move it in different directions, so as to extract it with less pain, danger, and difficulty. Several of these rings may also be used together, one being passed through the other in the manner of some watch-chains; and as they will in this case apply to all parts of the gullet, one of the rings may catch the obstruction if the others miss it.

On these occasions sponge may also be sometimes used to great advantage; a small piece swallowed perfectly dry, where the obstructing substance does not wholly stop the passage, may be swelled by suffering the patient to get down a small quantity of liquid, to such a size as nearly to fill the gullet; and this being drawn up somewhat hastily by a string strongly fastened to it

for the purpose, will hardly fail to remove the obstruction, unless it is so sharply pointed as to have penetrated deeply into the side of the passage.

Some authors have mentioned the compressibility of sponge as a property which may be improved to advantage in accidents of this sort, and have recommended the tying it closely about with a string or piece of tape, so contrived that it may be unwound and drawn off after the sponge has passed the obstructed part of the gullet; but we apprehend this expedient will be attended with many difficulties, and that a piece of animal flesh half-dressed and fastened to a string, will be swallowed and withdrawn with less abhorrence and inconvenience, and will in most cases answer the purpose as well, if not better, than the sponge.

In partial obstructions, and where the danger does not seem to be emergent, emetics are often administered with great success; but care should be taken to ascertain the nature of the obstructing body; if it is only such a substance as may be conceived to adhere to the sides of the gullet, a vomit will generally bring it off; but if it is any sharp instrument, or other rough and penetrating body, which may be supposed to be stuck or hooked into the sides of the passage, the force of the emetic may rather aggravate the evil, and increase the danger. Whenever a vomit is thought advisable, and the obstruction impedes the passage of liquids, to excite one, a clyster may be administered of the water in which a proper quantity of tobacco has been boiled; and this seldom fails to produce strong efforts to vomit.

In order to force obstructing bodies into the stomach, a wax candle, rendered flexible by warmth, and the surface oiled, may be used; or pieces of whalebone, wire, or tough and bending wood, to either of which a bit of sponge may be strongly and securely fastened, to prevent the throat from being lacerated or hurt by the point of the instrument; and in all cases of great emergency,

gency, and where delay may be attended with hazard of life, it will be right at all events to risque the thrusting even pointed substances of metal into the stomach, from whence they may possibly pass without occasioning inconvenience, rather than to suffer the patient to remain in agonies of pain, or the extremity of danger.

During all the operations which we have recommended, either for the extracting or forcing down obstructing bodies, the patient should be directed to drink frequently of some emollient liquor, such as warm milk and water, orgeat, thin water-gruel, or the like; if the passage is so far obstructed as to render swallowing difficult or impossible, injections of the same kind should be often thrown into the gullet by a crooked syringe, constructed to answer such purposes; and this method may not only answer the end of softening and lubricating the parts, and preventing inflammation, but may also in some cases actually loosen the offending body, and facilitate it's extraction.

And in all cases of difficulty, but which are unattended with immediate danger, after the several expedients which have been suggested have been tried without violence, but have proved ineffectual, it will be right to discontinue all endeavours, at least for a time, as violent inflammations have been too frequently the consequences of persisting in them eagerly; and the patient's life has been sacrificed to attempts imprudently and incautiously made to recover him from a less dangerous situation.

And in these cases, when all efforts have proved fruitless, and it is thought advisable to suspend all manual operations, recourse must be had to other means to prevent inflammatory disorders, which such obstructions frequently bring on; and to

this end bleeding, a low diet, and keeping the body open, are the most obvious measures; and to these may be added softening poultices applied quite round the neck and frequently renewed, and gargles of an emollient and healing quality.

Exercise, and even violent motion, has sometimes proved effectual, when other means have failed; the shaking of a horse, or the rattling of a carriage over a pavement, have in some instances disengaged sharp bodies which have stuck in the throat; and blows on the back have sometimes succeeded in the like cases, but more commonly when any substance has got into the wind-pipe.

A regimen is necessary when any obstructing matter has been forced into the stomach, lest it's lodging there should produce inflammations of the intestines; in such a case, the diet should be light, smooth, and liquid; and all strong liquors, spices, and whatever else is of a heating nature, should be avoided.

If the extraction, or forcing down the obstruction, is attended with so much difficulty as to take up a great deal of time, and the throat is totally filled either by the substance swallowed, or the swelling and inflammation occasioned by the irritation; clysters of strong broth, jellies, and other nourishing compositions, should be frequently thrown up to sustain life, till the inflammation can be got under, and other means tried, to afford more effectual relief.

The operation of bronchotomy, or opening the wind-pipe, is said to have been tried with success in some desperate cases; but as this must be performed by a very skilful surgeon, it is wholly unnecessary to describe it here.

C H A P. III.

Of Persons whose apparent Deaths have been occasioned by foul Air, noxious Vapours, or the Steams of Metals or Minerals.

AIR may become pernicious by a variety of means; it may be deprived of that active principle which tends to the preservation of life, by passing through fire; or it may be impregnated with exhalations from putrid animal or vegetable bodies, sulphur, mineral substances, or the like; the air of a room warmed by a charcoal fire, is well known to be extremely dangerous, though it does not seem to be determined whether the danger arises from a sulphureous oil extracted from the charcoal, and diffused through the room, or from the more volatile particles of sulphur itself disseminated in the same way.

The cleansing deep wells, and entering vaults and other subterraneans which have been long shut up, is always attended with danger; the air of such places ought to be previously purified by throwing in rockets of gunpowder and other combustibles; and these may also serve as experiments to ascertain the safety of admitting workmen; for if they burn without obstruction, no danger is to be apprehended: on the contrary, if they are immediately extinguished, it would be extremely imprudent to let them venture till farther means have been tried to render the air less obnoxious. The like danger arises from exhalations of wine, cyder, beer, and other fermented liquors, which have been long pent up in close cellars; and the same cautions are necessary before such places are entered. The air in mines frequently proves fatal from being charged with large quantities of sulphureous or mineral particles; and even that of rooms is rendered in some degree unwholesome by many candles, and especially when the flame of any of them is

accidentally extinguished, and the wick continues to burn. Lamps in bed-rooms are sometimes productive of ill consequences.

When on entering any of the places above pointed out, or any other place from whence the external air hath been excluded for any considerable length of time, the person finds himself oppressed and in danger of fainting, he should instantly retreat and swallow a draught of any acid liquor warm, which will in all probability prevent any farther ill effects.

But if he is actually overpowered, and loses his senses and motion entirely, he should be brought as speedily as possible into pure and open air, where salts or stimulating fluids should be held to his nose; and a vein may be opened in the arm or neck. His extremities should be put into a warm bath, and frictions used to the soles of his feet, ancles, and legs; as soon as he is capable of taking down a little liquid, some warm water acidulated with lemon-juice, vinegar, or sweet spirit of nitre, should be administered.

If the methods above-mentioned should prove ineffectual, stimulating clysters should be thrown up, which may be composed of considerable quantities of buckthorn syrup and tincture of senna, even from one ounce to two of each, according to circumstances; but if neither of these medicines can be readily procured, a common clyster, with double the usual portion of salt, may answer the purpose.

Other means may also be tried; such as clysters of tobacco-smoke, warmth, and the breath of another person blown into the mouth, and such other attempts may be made

to restore the circulation, as will be found under the various heads contained in this part of our work.

Instances have also been given of persons who have been recovered from apparent death, occasioned by noxious fumes or suffocations, by plunging the unfortunate

patient into a cold bath; and this seems to be justified by the practice of the Italians, who constantly apply it to dogs, which, to gratify the curiosity of travellers, are thrown into the Grotto del Cani, and recovered by being immersed in the neighbouring lake.

C H A P. IV.

Of apparent Death, occasioned by extreme Cold.

THIS kind of death sometimes happens in severe winters even in this climate, and is still more common in those northern regions to which the commerce of Great Britain frequently sends the adventurous voyager; it will not therefore be improper to allow a few lines to the management and treatment of persons at home and abroad who may be affected by the extremity of cold, either partially or generally.

When the blood in the smaller vessels towards the surface of the body, and that even in the larger, at the extremities, is frozen or congealed; it will follow of course that from this defect of circulation, a larger portion of this fluid will be forced into the brain, and bring on at first a degree of sleepiness, and at length an universal torpor and apoplexy.

This effect of cold is so emphatically described in one of the voyages of that ingenious navigator, Captain Cooke, that we apprehend it may be useful to our readers, and particularly to such of them as may have occasion to visit the colder countries, to transcribe the passages.

“Dr. Solander having often passed mountains in cold countries, was sensible that extreme cold, when joined with fatigue, occasions a drowsiness that is not easily resisted: he accordingly entreated his

“ friends to keep in motion, however disagreeable it might be to them; his words were, “ Whoever sits down will sleep, and whoever sleeps will wake no more.” Every one seemed accordingly armed with resolution; but of a sudden the cold became so very intense as to threaten the most direful effects. It was very remarkable, that Dr. Solander himself, who had so forcibly admonished and alarmed his party, should be the first who insisted upon being suffered to repose: in spite of the most earnest intreaties of his friends, he lay down amidst the snow, and it was with great difficulty they could keep him awake. One of the black servants became also weary and faint, and was upon the point of following the Doctor’s example; an officer was therefore detached with a party to make a fire on the first commodious spot they could meet with: Mr. Banks, with four more men, remained with the doctor and the black, who with the utmost difficulty were induced to come on; but when they had traversed the greatest part of the swamp, they expressed their inability of going any farther. When the black was informed, that if he remained there he would soon be frozen to death, he replied, he was so exhausted that death would be a relief to him. Dr. Solander

“ said he was not unwilling to go, but he
 “ must first take some sleep, notwithstanding
 “ ing what he had before declared to the
 “ company. Thus resolved, they both sat
 “ down, supported by bushes, and in a
 “ short time fell asleep. Intelligence now
 “ arrived from the advanced party, that a
 “ fire was kindled about a quarter of a mile
 “ farther on the way. Mr. Banks then
 “ waked the doctor, who had almost lost
 “ the use of his limbs already, though it
 “ was but a few minutes since he sat down;
 “ he nevertheless consented to go: every
 “ measure to relieve the black proved in-
 “ effectual; he remained motionless, and
 “ they were obliged to leave him to the
 “ care of another black servant and a sailor,
 “ who appeared to have been the least hurt
 “ by the cold; and they were to be re-
 “ lieved as soon as two others were suffi-
 “ ciently warmed to supply their places.
 “ The doctor was with much difficulty got
 “ to the fire.”

After describing the situation of the party who reached the fire, and the arrival of the sailor who they had left with the two black servants, the narrative proceeds, as follows:

“ Mr. Banks and four others proceeded
 “ to seek for the two blacks; they found
 “ Richmond (one of them) upon his legs,
 “ but incapable of moving them; the other
 “ black was lying senseless upon the ground.
 “ All endeavours to bring them to the fire
 “ were fruitless, nor was it possible to kindle
 “ one upon the spot, on account of the
 “ snow that had fallen, and was still falling;
 “ so that there was no alternative, and they
 “ were compelled to leave the two unfor-
 “ tunate negroes to their fate; making
 “ them, however, a bed of boughs of trees,
 “ and covering them very thick with the
 “ same.

“ As all hands had been employed in
 “ endeavouring to move the two blacks to
 “ the fire, and had therefore been exposed

“ to the cold for near an hour and a half,
 “ some of them began to be afflicted in the
 “ same manner as those they went to re-
 “ lieve. Briscoe, another of Mr. Banks’s
 “ servants, in particular, began to lose his
 “ sensibility. They at length reached the
 “ fire, and passed the night in a very dis-
 “ agreeable manner.”

The return of the morning afforded these curious adventurers but little hope of reaching their ship in safety, till the sun began to burst through the clouds, and invite them to make the attempt; but, “ previous
 “ to their setting out, messengers were dis-
 “ patched to the unhappy negroes, who
 “ returned with the melancholy news of
 “ their deaths.”

But though in a situation where no other resources were to be found, the approach to the fire was the only possible chance for saving life; yet, when other means are at hand, this is by no means adviseable: when the extremities are so frozen or benumbed with cold as to lose their sensibility and threaten the danger of mortification, sudden heat increases that danger, and is therefore to be carefully avoided.

To restore vegetables and meat in this situation, the common and certain practice is to immerse it in cold water; and every cook-maid will inform you, that the application of warm water or fire would immediately reduce it to a state little short of rottenness: living animals, and human bodies in the like situation, should be treated in nearly the same way.

Rubbing the benumbed extremities with snow, hath been found to answer the same purpose as plunging it in cold water; but the friction should be continued till the parts are restored to a degree of natural warmth, and recover the sense of feeling: after this the patient may be admitted into a room somewhat warmer, and drink a dish of tea, or other milk-warm diluting liquor, and the frictions should be repeated, and
 all.

all remains of the numbness removed, before he is suffered to come to the fire, or swallow any strong liquor.

And even when from a continued exposure to cold, the human body hath assumed a perfect appearance of death, and all the animal functions are totally suspended. It should be immediately placed in a bath of quite cold water, and afterwards rubbed

with flannels, till the vital warmth returns; or if this is not possible, it should be rubbed with snow, and treated in the same manner as we have already directed with respect to frozen limbs; and under both these methods of management, great hope may be entertained of preserving life, though no remaining traces of it have been discoverable even for many hours.

CHAP. V.

Of Persons apparently drowned.

WE are sorry to notice an observation in an eminent and justly-admired writer, that, "When a person has remained above a quarter of an hour under water, there can be no considerable hopes of his recovery." The assertions of an author of undoubted credit on such a subject, may be apt to encourage a remission of attempts; and many lives may be lost, which, by a due perseverance, grounded on necessary hope and confidence, might be preserved to their friends and society.

Instances occur frequently of persons brought back to life after having laid under water more than twice the space of time above-mentioned; and as it is impossible to limit the duration of time in which the vital spark may remain unextinguished, we apprehend it can be attended with no inconvenience, and may possibly be productive of much good, to extend our endeavours to restore life to those the time of whose immersion is uncertain, and even to such as have been known to have remained hours in that situation.

It is not our intention to offer any other instructions for the recovery of persons in this melancholy situation, than such as are promulgated by an association which has with infinite propriety been denominated

the *Humane Society*. The plan of this society, the methods they recommend, which appear to be truly judicious, and some cases extracted from their annual reports, will finish this chapter.

But we cannot lose this opportunity of exhorting our readers to contribute, as their convenience permits, to the support of this noble institution; the founders and several members of which can have no other objects in view, than to rescue individuals from untimely deaths, and their families from the distress which attends such melancholy events; and to benefit society by the preservation of lives, every one of which is of weight in the great scale of national riches and strength.

THE PLAN.

THE society undertakes to publish, in as extensive a manner as possible, the proper methods of treating persons in those unfortunate circumstances.

To distribute a premium of two guineas among the first persons, (not exceeding four in number) who will attempt to recover man, woman, or child, taken out of the water for dead, within thirty miles of the

the cities of London and Westminster; provided they had not been longer than two hours under the water; and provided the assistants persevere in the use of the means recommended, and no others, unless under the direction of a regular practitioner, for the space of two hours. This reward to be given, though they may not prove successful.

To distribute in like manner four guineas, wherever the patient has been restored to life.

To give to any publican, or other, who shall admit the body into his house without delay, and furnish the necessary accommodations, one guinea; and to secure them from the charge of burial, in unsuccessful cases.

A certain number of medical gentlemen, resident near the places where distillers by water are most frequent, have engaged to give their assistance gratis: these gentlemen are to have a fumigator, and other necessaries, always in readiness.

METHODS OF TREATMENT.

IN removing the body to a convenient place, great care is to be taken that it be not bruised, shaken violently, roughly handled, or carried over any one's shoulders, with the head hanging downwards; nor is it to be rolled upon the ground, or over a barrel, nor lifted up by the heels; for all these methods are injurious, and often destroy the small remains of life. The unfortunate object is to be cautiously conveyed in the arms of two or more persons, or in a carriage upon straw, lying, as on a bed, with the head a little raised, and kept in as natural and easy a position as possible.

The body, being well dried with a cloth, is to be placed in a bed or blanket properly warmed, but not too near a large fire. Bottles of hot water are then to be laid to

the bottoms of the feet, in the joints of the knees, and under the arm-pits; and a warming-pan, moderately heated, or hot bricks wrapped in cloths, rubbed over the body, and particularly along the back. The natural and kindly warmth of a healthy person lying by the side of the body, particularly by that of a child, has been in many cases very efficacious. The windows or door of the room, should be left open, and no more persons be admitted into it than those who are absolutely necessary, as the life of the patient greatly depends upon his having the benefit of pure air. The shirt or cloaths of an attendant, or the skin of a sheep fresh killed, may also be used with advantage. When accidents of this kind happen in the neighbourhood of a warm bath, brew-house, bake-house, glass-house, saltern, soap manufactory, or any fabric where warm lees, ashes, embers, grains, sand, or water, can be easily procured, it will be very proper to place the body in any of these, moderated to a degree of heat but very little exceeding that of a healthy person.

The body being placed in one or other of these advantageous situations as speedily as possible, various stimulating means are next to be employed. Those recommended as most efficacious are, blowing with force into the lungs, by applying the mouth to that of the patient, closing at the same time his nostrils with one hand, and gently expelling the air again by pressing the chest with the other, imitating the strong breathing of a healthy person; the medium of a handkerchief or cloth may be used to render the operation less indelicate. Throwing the smoke of tobacco from the fundament into the bowels, by means of a pipe or fumigator, such as are used in administering clysters; a pair of bellows may be employed until other instruments can be procured. Rubbing the belly, chest, back, and arms, with a coarse cloth, or dry salt, so as not to rub off the skin;

skin; or with a flannel dipped in brandy, rum, or gin; applying spirits of hartshorn, volatile salts, or any other stimulating substance, to the nostrils, and rubbing them upon the temples very frequently; tickling the throat with a feather, so as to excite a propensity to vomit; and the nostrils also with a feather, snuff, or any other stimulant, to provoke sneezing. The body should at intervals be shaken and varied in it's position.

If any signs of returning life appear, such as sighing, gasping, twichings, or any other convulsive motions, beating of the heart, or the return of the natural colour and warmth, a spoonful of water may be administered, in order to learn whether the patient has regained the power of swallowing; if so, a spoonful or two of warm wine, or brandy and water, may be given with advantage, but not before, as the liquor might otherwise get into the lungs. Some of the above methods are to be persevered in until the patient is restored.

Where the patient has lain but a short time senseless, blowing into the lungs or bowels has been in some cases found sufficient; yet a speedy recovery is not to be expected in general. The above methods are therefore advised to be continued with spirit for two hours, or upwards, although there should not in that time be the least symptoms of returning life. The vulgar notion that a person will recover in a few minutes, or not at all, has most certainly caused the death of many who might otherwise have been saved.

Most of the above means are happily of such a nature that they may be begun immediately, and that too by persons unacquainted with the medical art; yet it is always adviseable to seek the assistance of some regular practitioner as soon as possible, as it is to be presumed that such a one will be more skilful and expert, and better able to vary the methods of procedure, as circumstances require.

The society inform practitioners in general, that several cases have fallen under their observation, in which early bleeding has been productive of pernicious and even fatal effects. They are therefore of opinion, that the opening of a vessel should not be placed among the common methods of treatment, or such as are always applicable, although it may sometimes be successfully employed to remove subsequent symptoms of an inflammatory nature.

They also observe, that most of the above means of restoration are applicable to various other cases of apparent deaths; whether from hanging, apoplectic and convulsive fits, cold, suffocation by damps or noxious vapours, proceeding from coal-mines, the confined air of wells, cisterns, caves, or the must of fermenting liquors.

CASE I.

A Child of four years old, son to a private soldier in the Surry militia, fell from one of the wharfs at Rochester into the river Medway: after having continued above a quarter of an hour under water, the body was found, and laid on the shore, without any apparent remains of life, where it lay for a quarter of an hour, when the owner of the wharf coming to the knowledge of the accident, sent for a surgeon; but he not being instantly at hand, his apprentice immediately attended, and finding the face of the child very livid, and considerably swelled, and the extremities cold and rigid, he very judiciously ordered the body to be carried home, and immediately to be put into a bath of hot water, which seemed to have a surprizing effect in removing the livid appearance. The body was suffered to remain in the hot water twenty minutes, and in a few minutes after it was taken out of the bath, the surgeon came first to see it, and proceeded to use stimulants, and every

8 N method

method suggested by the society. It was, however, an hour and forty minutes that constant frictions had been persisted in on each of the extremities, and injections of the fumes of tobacco administered, before any artery could be perceived to move; when, at length, some very indistinct tremor was perceivable in the pulse, attended with a very slight kecking of the breath, upon which a strong solution of emetic tartar was poured down the throat from a spoon; in all, perhaps, five grains were got down, with several small doses of oxymel of squills: but after all this, for the space of still an hour and a half more, no farther advances seemed to have been made, so that the by-standers gave up all hopes of life, and concluded it's return impossible; yet the surgeon still persevered in the use of every stimulus he could think of, and at the end of in all four hours, had the pleasing satisfaction of perceiving a very profuse discharge from the fundament, immediately accompanied with a violent vomiting, and gradually powerful increase of the pulse and respiration; at first, seemingly convulsive, but by degrees more enlarged and full, till every favourable circumstance was fully established; so that in five hours from the time the child was taken out of the river, he had fully escaped from all danger.

C A S E II.

A Gentleman of the faculty crossing the water of Eden in Scotland, accidentally saw a child in the bottom of the river; he instantly dismounted, ran into the water, and laid hold of the child, (a boy about seventeen months old) laid him upon the warm sand, and called out for help. A man, with three or four women, came instantly to his assistance; blankets, salt, and spirits, were soon procured, and the surgeon had a female, and by mere accident also, a male

catheter in his pocket. The child was laid upon the blankets, with his head a little elevated, and stripped of his wet cloaths; the humane assistant chusing to begin his work directly where he was, as the day was exceedingly warm, rather than run any risque by delay, especially as he understood that the fires in the neighbouring houses were mostly out, or very weak. There was not the most distant appearance of life; every thing about him had the strongest marks of mortality. The surgeon began with rubbing his left breast with salt, and next applied a little hartshorn to his nose and lips; his temples were then chafed with some aqua vitæ; and finally, the female catheter was introduced into his mouth, and the male one into his nostril, and the one and the other alternately blown into. After the rubbing, blowing, and chafing, for a quarter of an hour, there was still no appearance of life: every spectator seemed convinced that the endeavours were fruitless, and that it was impossible to do any service. They endeavoured at this time to dissuade the surgeon from making any farther attempts; but he silenced their clamours by telling them matters could be no worse than they apprehended, and he was determined to persevere. One of the women was dispatched for a bandage, and other necessities, to open the jugular vein. In the mean time the friction was renewed with salt, and blowing strongly with the catheters. Anterior to the return of the woman with the bandage, a weak pulsation was perceived at the heart. This exhilarated this benevolent gentleman's spirits, and animated him in the discharge of what he deemed his duty. By persevering for a minute or two longer, he could hear a feeble rattling in the throat, and saw a weak quivering of the lips; the livid appearance in the countenance began to disperse; one of the infant's eyes soon half opened; and life seemed willing once more to animate his little frame. The hartshorn was again applied to his nose and lips;

lips; and one of the spectators was directed to rub his hands and feet with a little spirits. By this time he emitted a little curdled milk which he had taken before the accident happened: he also got passage of his belly; and now every thing wore a most favourable appearance. His mother was ordered to run home, strip, and go to bed; and the child was wrapped in the blankets, and carried to the house, by this indefatigable Samaritan. A pair of blankets extraordinary were put upon the bed, and a fire lighted in the room: the heat of his mother soon warmed his system; he fell into a profound sleep and profuse sweats. A pretty brisk cathartic was administered next morning, which emptied the stomach and bowels of their contents; nothing farther was necessary to be done. The boy has had the confluent small-pox since, and recovered very well.

As no person saw him fall into the water, it is impossible to say with certainty how long he remained there. But if a judgment may be formed from the time he left his mother, the distance he had walked, the time he was found, and the situation he was in, he must have been at least nine minutes under water. It was about twenty minutes after the attempts were begun, before there was the least presence of life; and it was half an hour, or near that period, that the endeavours were continued, before he was laid in bed.

C A S E III.

A Boy, aged seven years, strolled with his brother, two years older than himself, to a river which runs at the distance of about three hundred yards from their father's house, where a lighter was anchored. They went into it; and the boy in attempting to get some rushes which grew by the bank, fell into the river, which in that spot was seven feet deep. The cries of the

elder boy, that his brother was drowned, were instantly heard by some men, who, at about a hundred and fifty yards distance, were hedging round some turnips. They ran to the miller; who immediately returned, with the messenger and his servant, to the spot where the boy had fallen in, and were so fortunate as to lay hold of him at the first trial, and draw him out, apparently dead, with his countenance bloated and livid, and his eyes and stomach very much swoln. This was supposed to be about twenty minutes from his first falling in. He was immediately carried to the mills; and whilst some neighbours rubbed him well, and stripped him from his wet cloaths, and laid salt upon his stomach, the father went to call a surgeon, who arrived at the mill about an hour and a half after the accident, and found signs of returning life by the warmth of the body, a small tremulous intermitting pulse, and interrupted breathing; but he was totally senseless; his eyes were shut, and his face still bloated and livid. The people of the house heated some salt in a pan, which was applied, sewed up in bags, to each arm-pit. Two assistants rubbed each leg and thigh with a warm flannel, whilst the surgeon briskly agitated the stomach and abdomen. This in about two minutes made him vomit up about a quart of water, so foetid, that the smell was almost intolerable. The fumes of tobacco were then conveyed up the anus, which seemed to affect him much, as he was seized with violent struggles, and convulsions in his limbs. His teeth were forced open, and a tea-spoonful of brandy was frequently poured down his throat, which, by irritation with the spoon, always made him vomit up more water. By this time he breathed tolerably well, and his pulse became full and strong. A vein was then opened in the arm, which bled freely; after tying it up, his pulse seemed languid, and he was much convulsed, and breathed not so well as before. The fumes of tobacco,

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the friction, and the brandy, were now repeated, and he soon became better than he was before the bleeding, but still senseless, and sometimes violently struggling. His head being now more particularly affected, the left jugular vein, which seemed full and prominent, was opened, from which one gush of blood came, and then it totally ceased bleeding. An assistant was ordered to rub his head briskly. In about a minute and a half the vein began to drop; after the same distance of time, he bled in as full a stream as from the arm; the convulsions soon after ceased; the pulse beat quite regular and even; he breathed easy, and fell into a calm profound sleep, from past nine at night till eight the next morning; when he awoke in perfect health, got out of bed to make water, and eat some bread and butter. He afterwards continued free from any kind of complaint, but had not the least recollection of his ever having fallen into the water.

CASE IV.

A Gentleman's son, about five years old, fell into a river, in which, by the best accounts which could be obtained, he must have remained ten minutes at least. He was discovered by his father, floating near the opposite shore, from whence he fell in; his head, arms, and legs under water, so that part of his back only appeared above the surface. His unhappy parent immediately plunged into the river to his assistance, and brought him directly into the house, which was fortunately very near, to all appearance dead. Having caused his wet cloaths to be forthwith removed, he had him wrapped in a warm blanket, and laid before a fire, whilst the assistants were preparing hot cloaths and flannels for frictions. The extremities of the child were stiff with an universal coldness, no

perceptible pulsation in the arteries of the temples or wrists; he was placed between warm blankets in a bed, with his head a little raised; bottles of hot water were applied to the soles of his feet; in a short time after his legs were immersed in a pail of warm water; frictions with hot flannels and cloths were applied to the breast, abdomen, and extremities; a warming-pan, moderately heated, along the spine, and volatiles to the nose and temples. In a few minutes he moaned; after that he began to cry out, which he continued more loudly than at first, for the space of twenty minutes, till his efforts towards respiration were very strong; but at this time his breathing was laborious, with frequent interruptions, and an encreased screaming noise; his limbs now became flexible; the pulses at his wrists were at this time perceptible, but exceedingly feeble. He was now seized with spasms in his extremities, and became universally convulsed. A stimulating clyster was thrown up the intestines, which seemed to have very good effects; but it was a full hour before he recovered any consciousness, at which time he took some wine and water warm, and seemed disposed to sleep, which he fell into and enjoyed for the space of three hours. In the evening he was free from complaints, except a slight head-ache, and small degree of thirst; his skin was rather hot, and his pulse more quick than natural. He took a gentle laxative medicine, which produced the desired effect; and by the morning he was in apparent good health, and nothing worse for his accident.

CASE V.

A Child, aged two years, fell into a spring that was at the bottom of a garden. It is supposed, from circumstances, that the child must have been under water near half an hour. Some minutes

nutes were elapsed before it's mother had missed the infant. Apprehending it might have wandered near the spring, she ran to the place, but not finding it there, she searched the stable and other out-houses, and afterwards returned to the spring, where examining more minutely with a stick, she perceived the child. It was taken up without any signs of life, and carried into a neighbouring house. The attendants rubbed the child with salt, but this did not seem to be of any service. They sent a messenger to it's father, who was at work about half a mile from the place, desiring him to run to a surgeon, who lived at the distance of about a mile and a half. From the time that the child was taken out of the water, to the arrival of the surgeon, it is imagined that an hour had elapsed; and he found the child placed by the fire, not in the least recovered. His body was wet and cold, for in their confusion they had let it remain in it's wet cloaths. The surgeon ordered it to be immediately undressed, and placed in a warm blanket. Hot bricks, wrapped in a cloth, were put to it's feet. The smoke of tobacco was applied to the intestines. These and other methods were pursued with vigour, but it was more than half an hour before any favourable symptoms appeared. The first was a frothing at the mouth; this was succeeded by twitchings and slight convulsions. Upon irritating it's throat, the child puked, which seemed to revive it yet more. In the space of two hours it began to be tolerably well recovered, though it breathed with difficulty. The difficulty of breathing continued for two or three days; but the child was afterwards perfectly recovered.

C A S E VI.

TWO fishermen of Brighthelmstone, going off in a small boat to take some mackarel from a fishing-boat opposite to

that town, in their return to shore, by a sudden squall of wind and a great sea, their boat was overset, and the two men unhappily caught under the boat, where they continued in that distressed condition for a quarter of an hour, before any body could afford them any assistance, from the very great roughness of the sea. A surgeon was with them as soon as they were brought from the shore, and one of them was so far gone as to afford little or no hopes of recovering. But by immediately pursuing with diligence the method recommended by the society, in about a quarter of an hour a manifest glow and warmth was perceived all over his body and extremities. By persevering in rubbing him with hot flannels and salt, and by applying bottles of hot water to his feet, arm-pits, &c. he became more and more sensible, and was soon quite recovered from the accident, excepting a large contusion upon his leg, which, after some time, got well. The other man recovered also; but his symptoms were much more favourable, owing to his being able, naturally and immediately, to discharge a large quantity of sea-water from his stomach.

C A S E VII.

ON Monday March 24, 1777, a child about fifteen months old fell into a river that runs at the bottom of a garden, and was carried down the stream about thirty rods, to a mill used for dressing of leather. Two men who were at work at the mill saw the child, took him out, and sent immediately for a surgeon. When he came, he found the child with it's eyes closed, quite cold, without the least sign of life, and to all appearance dead. A fire was ordered to be made, and the wet cloaths to be taken off with all possible expedition. The body was placed before the fire, and dried with warm linen cloths,

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(which absorb the wet much sooner and better than woollen ones;) and then the surgeon, assisted by some others, began rubbing with flannel cloths, wetted with brandy, with some spirits of hartshorn mixed in it; and in about five minutes the child made a slight groaning kind of noise, which was increased by the continual rubbing: soon after he vomited about half a pint of water. The groaning then increased, and evident signs of returning life appeared. The rubbing was continued for about three quarters of an hour, and then the poor distracted mother was directed to go to bed, and take the child close to her, and to continue the rubbing along the spine. In the evening he fell into a sound sleep, and a gentle sweat, breathing very easy and well.

It was full a quarter of an hour, from the commencement of the rubbing, before the least degree of warmth could be perceived in the child, and about twenty minutes before any pulse could be felt at the wrist, and then very faintly; all the time he never opened his eyes, or moved his limbs in the least.

C A S E VIII.

ON Sunday night, July 5, 1778, at about half past ten, a youth, aged eighteen, an apprentice, was brought home to his master's house upon boards, to all appearance dead, from a stroke of lightning. Upon entering the room, and examining the body, it was found to be both stiff and cold, nor could the least warmth be perceived in any part of the body or extremities: his fingers and toes were contracted, his eyes sunk, and his countenance livid. His wet cloaths were immediately stripped off, and he was placed with all possible expedition between blankets made very hot. The assistants then used strong friction over the whole body. During this,

a very large orifice was opened in the basilic vein, and by slow degrees near twelve ounces of blood was drawn. Volatile and cordial medicines were forced into the mouth, but for a considerable time to no effect, he being totally incapable of swallowing. Large blistering plaisters were applied to the whole spine of the back, and to both the feet. In half an hour, about eight ounces more of blood were procured, and by the repeated use of volatiles, together with the strongest frictions the whole time, at about half past eleven a very slight convulsive motion of the diaphragm, or hiccough, was perceived, which was succeeded some little time after by a slight warmth and irregular pulsation of the heart; and soon after by a very slow interrupted respiration. Before twelve he began to swallow, and by steadily using the friction and volatiles for an hour longer, a regular pulsation ensued; the lungs performed their office, and a gradual heat and recovery of every faculty succeeded. About one he spoke, though not articulately. In the morning he was in a considerable fever, in a great measure accounted for by the pain of the blisters, and the medicines applied the preceding night: but by the use of a cooling regimen, together with occasional laxatives, he was restored to the enjoyment of perfect health in the course of a week. Upon the strictest examination of the body when first brought home, no external injury appeared, except a bruise along the right-arm, which, it is presumed, he received either from the first fall, or at the time of being placed on the board for conveyance, either sufficiently accounting for such appearance. Upon being questioned as to what had happened, he knew nothing but from the testimony of his companion, who was not in the least affected. It appears that they had been at Islington, and were, on their return, caught in a storm near the turnpike at the London Apprentice, Hoxton; at which time this youth

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was struck down at the other's feet: and it appears, from the best calculation, that before the other could procure help to have his companion conveyed home, and medical assistance could be had, an hour at least must have elapsed, during all which time he was in very heavy rain.

C A S E IX.

A Young woman, aged only twenty-two years, in a fit of despair, attempted to destroy herself by hanging. In this state she was discovered, and cut down in about a quarter of an hour from the time it was supposed, from circumstances, she had been suspended, and she was then totally insensible and motionless: there was no perceptible beating of the heart, nor pulsation in the arteries of the wrists or temples; respiration had also apparently ceased; the face was swollen and livid, and there was a frothing at her mouth. Several persons were immediately employed in assisting to place the patient between warm blankets, in using frictions, and in blowing strongly into the lungs, by applying the mouth to that of the unfortunate person. It was with difficulty that any one could be persuaded to undertake this operation, till the medium of an handkerchief was suggested, and then one of the women applied with great earnestness to the business. A warming-pan, moderately heated, was rubbed over the back for a considerable time; the feet and legs were first immersed in warm water, and then rubbed with warm cloths; volatiles were also applied to the nose and temples. After they had persisted in the use of these means for upwards of twenty minutes, some signs of returning life were perceived, such as sighing, and slight twitchings. These were followed in a little time by convulsive motions, a beating at the heart, and a pulse at the wrists, with a return of the natural colour and warmth.

It was then judged proper to take away a few ounces of blood, to prevent the effects of a pressure upon the brain, which might happen from a surcharge of blood, forced into the vessels by the strangulation of the cord. The girl from that time gradually recovered, and was soon perfectly restored, body and mind, and to appearance sincerely penitent.

C A S E X.

ON Saturday August 30, 1777, at five o'clock in the afternoon, a woman in a fit of insanity, hung herself with a garter fastened to a staple in the ceiling of her chamber, and was suspended by the neck full a quarter of an hour, as appears from many circumstances collected from her husband and servants in the house. When the husband found her, as above described, (he wanting some keys she had in her possession, and going in search of her) he cut her down, and sent immediately for a surgeon, who was there in a few minutes, and was met at the door by several people who had seen her, and told him he could not be of any use, as the woman was certainly dead. The surgeon, however, paid no attention to them, but pushed up stairs, where he found her lying upon a bed, cold, motionless, no pulse, and to all appearance dead. He had her stripped and put instantly into a warm bed; and having opened a vein in the arm, a few drops of blood followed the lancet, but soon stopped. The surgeon's assistant and three women were set with flesh-brushes and flannel cushions to make all the friction they were able upon the extremities, whilst her breast was rubbed with a piece of flannel, and some volatile spirits which he happened to have with him. Warm flannels were constantly applied to the belly, and her mouth moistened with brandy. In about ten minutes the blood pushed from the orifice in the arm, which

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was directly stopped, nor was she suffered to lose one ounce. The lungs were then inflated, by blowing down the throat. In about a quarter of an hour, that operation seemed to have an amazing effect, it appeared to stimulate the lungs, and a small convulsion was immediately perceived on the side of the neck. Half an hour was elapsed before a perfect pulse could be distinguished; and then the strokes were at a great distance one from another. The body grew universally warm; and upon inflating the lungs again, she made a faint respiration; after which she grew stronger, and was able to take a small spoonful of brandy, and she began in three quarters of an hour to recover very fast. She breathed tolerably free, and the motion of the heart was perceptible. Eau de luce was applied to her nostrils, which had a particular effect upon her, as it appeared to stimulate her from head to foot. These methods were continued an hour and three quarters, when she breathed freely, and was able to swallow now and then a spoonful of cordial julep. About eight o'clock she was much recovered; at ten she opened her eyes, and at twelve spoke faintly. She continued growing better every minute, and on Sunday was able to sit up in her chamber. On Monday appeared perfectly well, except the wound upon her neck made by the garter, which digested out very deep indeed.

CASE XI.

A Fine infant, aged about eighteen months, having been laid to sleep on a bed, the bedstead of which was made to turn up, was by the carelessness of a servant covered with some cloths, and then turned up, in which situation the child remained an hour and a half before it was discovered; at which time it's countenance was livid and swoln, the eyes half shut and fixed, and

the mouth a little opened. No respiration nor pulsation of any of the arteries, or of the heart, was perceptible: a profuse sweat, attended with that clamminess, which is always an alarming symptom, was diffused over the body. It's cloaths were immediately cut off, and the body being stripped entirely naked, was exposed to the open air, that the external vessels might be constricted thereby, and the blood being propelled inwardly, might stimulate the heart to it's wonted action; in this respect differing from the methods recommended in suffocation by water, by which the circulation is originally checked externally. The other means used were similar; such as gently agitating the body, and varying it's position; applying gentle frictions, first to the breast, and afterwards to the extremities, and rubbing volatile spirits upon the temples and nostrils: in about ten or fifteen minutes, symptoms of returning life appeared; such as pulsation in the arteries, sighs at intervals, and the like. These gradually increased till the next morning, when the infant appeared perfectly recovered.

CASE XII.

APRIL 9, 1778, two common women, about five in the morning, went to sleep in a hut where the tools are kept, adjoining to a lime-kiln. At nine they were found there to appearance dead from suffocation. On the arrival of medical assistance, one of them was found to have still some little pulse and respiration. About six ounces of blood were taken away from her, and frictions, with volatile alkali, used for near half an hour in the field, but without any sensible advantage. Some of the solution of tartar emetic was attempted to be given her, of which she swallowed very little, if any. She was taken to an infirmary at ten, seemingly having lost ground. There was then no pulsation at the wrist; that

that at the heart was very languid; the body was cold, the jaws and hands were strongly closed; the respiration was obscure, short, and laborious; the eyes were shut and insensible to the action of light; and there was a convulsive constriction of the throat. Warmth and general frictions were very assiduously applied for twenty minutes, without any sensible progress, except a small degree of warmth, even less than might have been expected from the continued frictions; gentle attempts were made (in vain) to force open the jaw for the introduction of some liquid; warm fomentations were then applied to the trunk and extremities, and seemed soon to produce much more beneficial effects.

In about ten minutes the breathing and warmth began to improve, the jaw relaxed a little, the pupil was sensible to the light, and in ten minutes more a pulsation was first perceptible at the wrist, and her breathing much freer. Some cold water was given her, which, after several efforts, she swallowed with great difficulty; as she did, soon after, by degrees, a solution of a grain and a half of emetic tartar, which vomited her in about an hour. A stimulating clyster was then thrown up, and the first thing she seemed to be sensible of was the desire of parting with it. At twelve she could not speak, but when asked how she did, she opened her eyes and shook her head. About two she spoke; and in the evening was much recovered: her breathing was still laborious, and her pulse very small. She was bled, and took a mixture of æther. April 10, she was well recovered, and the next day left the infirmary.

CASE XIII.

A Child, two years old, son to a skinner and white-leather-dresser, fell into an old lime-pit of his father's. His mother

declared that he had slipped out of the house from her, and she had not seen him for at least a quarter of an hour: be that as it may, he was providentially discovered by an elder brother, floating on his back, with his head below the water. He jumped into the pit, had strength enough to take him up, but could not carry him into the house: on the alarm given, his mother and others did so, and undressed him. In the mean time a surgeon was sent for, who found him stiff, without any pulse; his eyes fixed, and his face, particularly his lips, very livid. He was ordered to be laid before a good fire on a woman's knee, and two others were constantly employed in rubbing his breast, back, and sides, with warm flannels, while the surgeon was rubbing his temples, lips, and nose, with spirits of hartshorn. Five minutes were spent without any prospect of success; however, the assistants persevered, and before ten minutes were elapsed, his eyes began to move, and the colour of his face was gradually returning. In a few minutes more he yawned, and moved his lips, with frequent attempts to vomit. A tea-spoonful of warm brandy and water was then given at proper periods, by which, and the continued friction, he appeared in a fair way of recovery, though the colour of his lips was not altered. He was now ordered to be wrapped in a blanket well warmed, and put to bed in his mother's arms. He soon fell asleep, and after two hours awaked in seeming good health; though, for fear any of the lime-water which he might have swallowed should hurt the stomach and bowels, he was ordered to drink barley-water, in which a considerable quantity of gum-arabic was dissolved, and he was directed to take a dose of senna with manna; which had so good an effect, that next day he was in perfect health.

CASE XIV.

A Farmer, in a village in the county of Salop, about half past twelve o'clock at noon, found means, during a fit of insanity, to hang himself, whilst the rest of the family were busily engaged in the affairs of the house. The time he continued in the above situation, cannot be exactly ascertained; but from a variety of concurring circumstances, it is firmly believed to be about twelve or fourteen minutes, some think between fifteen and sixteen. When he was cut down there was not the least apparent sign of life remaining; it was, however, recommended by some of the neighbours, to send to a neighbouring town with all possible speed, to request the attendance of a surgeon, who fortunately happened to be at home when the messenger arrived, and set off instantly. During this interval, (about thirty-five or forty minutes) the attendants did every thing they could think of to promote his recovery; and a short time before the surgeon saw him, he had been observed to fetch a few deep sighs, or gasps, though a considerable space of time had elapsed between each. Upon examination, scarce any perceptible motion could be found in the artery at the wrist; the surface of his body was remarkably cold, particularly his extremities; the blood was settled in his face, so as to make his mouth and lips appear very livid; a large quantity of frothy saliva was frequently discharged, together with several clots of coagulated blood. As there was no time to be lost, the surgeon immediately ordered him to be placed upon a bed (till now he had been supported between two assistants upon a chair) with a hot blanket under him, his head and shoulders a little raised; in this attitude four strong men were employed to make use of the most powerful friction, with warm flannels, strong volatile spirits

were frequently applied to his nose and temples: the doors and windows were kept open, so that the fresh air might have free access to him; in a short time the good effects of the above treatment were very visible, an agreeable warmth began to be diffused over the surface of the body; his gasps and sighs became more frequent, his pulse became stronger, and the vibrations more regular. Soon after the appearances of the above favourable symptoms, he was attacked with the most violent spasms, and they became so general, that there was scarcely a muscle in the whole system unaffected. A vein was now opened during a remission of the spasmodic contractions, and about eight or nine ounces of blood were drawn, in hopes that evacuation might be a means of abating this troublesome symptom; but it did not succeed, for they continued with unremitting violence near an hour after, so that the assistants had often great difficulty to keep him upon the bed: an attendant was obliged to keep his thumb upon the orifice the whole time, as his arm could never be kept sufficiently steady to apply a bandage till the spasms left him. About four o'clock, they began to diminish, and in a few minutes left him entirely, when he immediately fell into a fine easy sleep, and was in every respect so compleatly restored, that all the attendants (except one) were ordered to leave the room, that he might not be disturbed. He continued in a dozing state till between ten and eleven o'clock the same night, and then awaked perfectly sensible, but complained of a prodigious soreness in the muscles of his back, breast, and throat. The next day, he had a continual discharge of saliva from his mouth, together with a remarkable soreness in his gums and teeth, similar to what occurs during a spitting raised by the use of mercury; his neck, where the cord had pressed, was very black, particularly that part where the knot was applied, which

which was under the ear, and the whole of the muscle was much inflamed, sore and tender. An acid gargle was ordered for his mouth, and a discutient embrocation to be frequently applied to his throat externally, from the use of which, all complaints gradually disappeared, and at the end of six days he was in perfect health.

CASE XV.

A Cooper of Deptford, bathing in the river Thames, near the Greenland Dock, Rotherhithe, was accidentally drowned. After being under water ten minutes, he was taken up, but to all appearance dead, and conveyed to an apartment of another, a cooper, where frictions with salt and brandy were used, and volatile aromatic spirits were applied to the temples, wrists, and chest, and as soon as possible he was put into a warm bath; about twenty minutes after which a spasm was perceived in the lower jaw; the frictions were ordered to be well continued up-

on the spine; soon after came on a total spasm; but he was still kept in the bath for near an hour, by which time he began to sigh: endeavours were then made to get a little warm brandy and water down, but this was effected with great difficulty, a contraction being so strong on the lower jaw; yet the trial was very often repeated, until such time as he swallowed with ease. Soon after he began to cry, and utter some words, but not so as to be understood; the frictions and other means were continued until he was capable of speaking distinctly. He was then taken out of the bath, and wiped dry; and being wrapped in flannel, was put into a warm bed: a cordial mixture was then given him, but in the course of an hour he had several fits. The medicine was repeated; and by the evening he had dosed and was better, but complained of much soreness upon the parts where frictions had been made use of; notwithstanding which he was able to be carried home in a chaise the next morning, but having no stool and his fits returning, a laxative mixture was ordered, from which time he continued to grow better.

CHAP. VI.

Of Persons apparently dead from Intoxication and Convulsion Fits.

SCARCE a week passes in which the deaths of one or more persons are not announced in the public papers, who are supposed to be destroyed by the immoderate use of spirituous liquors. Intoxication with other fluids, though, when often repeated, it always proves fatal at last, does not produce it's deleterious effect so suddenly.

Nor do even spirits always occasion immediate death, though taken in such quantities as to bring on all the appearances of

mortality: they sometimes act as opiates; and though the vital functions are suspended, it is by no means certain that the use of them may not be recovered.

When, therefore, after a debauch of this most unjustifiable kind, the body either assumes the appearances of death, or so long a sleep succeeds as to beget apprehensions of it's eternal continuance, all rousing and stimulating methods should be tried; such as shaking, raising it on the legs, and moving it across the room: volatiles also should

should be applied to the nose, and the forehead, temples, and wrists, rubbed with Hungary water, lavender water, or other aromatic spirits. If the pulses are strong, it may be right to take away a few ounces of blood; but this must depend on circumstances: if the mouth can be got open, a spoonful or two of lemonade, vinegar and water, or other acid mixture, may be conveyed into it; and if any part of it should pass into the stomach, it may possibly produce favourable effects.

If none of these endeavours prove effectual, the lower extremities may be bathed in warm water, and a stimulating clyster thrown up; and upon the appearance of returning life or sensibility, the patient should be treated as on recovery from any of those sudden deaths mentioned in the directions of the Humane Society.

But besides those whose lives are apparently lost from the immediate effects of large draughts of strong liquors, there are many others who are actually sacrificed to neglect or inattention whilst they are under the influence of drunkenness.

Men in this situation are always perverse, obstinate, and absurd; acquiring ideal wisdom as they part with common-sense, they scorn to be supported, guarded, or accompanied; and frequently persist in retiring to some unobserved place, where they sleep not only in awkward postures, unfavourable to the discharge of the enormous loads with which their stomachs are oppressed; but with all the ligatures of stock or neckcloth, garters, tight wrists, and other unnatural compressions.

Nor is this the only danger which attends persons devoted to this wretched vice. Unable to support the weight of their overbalanced heads, they fall down in sand, mud, or water; and, incapable of raising themselves, perish in that miserable condition: a fate which may in general be averted, if their friends would pay a little regard to them, and, when they appear disposed to

sleep, lay them carefully on their beds, on their sides, with the heads somewhat raised, and in such positions as to prevent their twisting their necks, and endangering strangulation.

Those who are accustomed to drink to excess are subject to extreme thirst, which they quench with the first liquor they can get at, without regard to the quality of it, or the effect it may produce; thus it may easily be conceived, that draughts of milk, poured into a stomach which has for many hours been the receptacle of four punch, must coagulate and become wholly indigestible; and that vapid small beer washing intestines inflamed by ardent spirits, must occasion so sudden a change as to be productive of dangerous consequences. Warm tea of herbs, barley-water, water with a toast, or a spoonful of the syrup of capillaire in it, are the safest drinks on these occasions.

When children, or other persons previously in good health, appear to be carried off in convulsions, they should by no means be interred until attempts have been made to recover them; and to this end the same means may be tried as have been already pointed out in other cases of accidental death; and the like means should be tried on children apparently dead born, or who seem to expire immediately after they are brought into the world: a life saved is of importance to the community, and the hopes of many families have probably been lost for want of such assistance as is within the reach of every individual.

We shall conclude this chapter with a case mentioned in a very ingenious pamphlet on the practicability of recovering persons visibly dead.

C A S E.

IN the parish of St. Clement's, at Colchester, a child of six months old, lying upon it's mother's lap, having had the breast, was seized

seized with a strong convulsion-fit, which lasted so long, and ended with so total a privation of motion in the body, lungs, and pulse, that it was deemed absolutely dead. It was accordingly stripped, laid out, the passing bell ordered to be tolled, and a coffin to be made: but a neighbouring gentlewoman who used to admire the child, hearing of it's sudden death, hastened to the house, and upon examining the child, found it not cold, it's joints limber, and fancied that a glass she held to it's mouth and nose was a little damped with the breath; upon which she took the child

in her lap, sat down before the fire, rubbed it, and kept it in gentle agitation. In a quarter of an hour she felt the heart begin to beat faintly; she then put a little of the mother's milk into it's mouth, continued to rub it's palms and soles, found the child begin to move, and that the milk was swallowed; and in another quarter of an hour she had the satisfaction of restoring to it's disconsolate mother the babe quite recovered, eager to lay hold of the breast, and able to suck again. The child throve, had no more fits, grew up, and was alive several years after.

BOOK XI.

Surgery.

C H A P. I.

Of giving general Assistance without Chirurgical Skill.

IT would be foreign to the purpose of our present work, to point out and describe the various operations of surgery, or to give directions in cases where anatomical knowledge is necessary; the manual ingenuity of the surgeon can only be acquired by study and practice, and before any progress can be made in this branch of the profession, an intimate acquaintance with the wonderful structure of the human body is absolutely necessary.

Yet there are a variety of cases in which help may be administered by persons wholly unskilled in surgery; and many dangerous circumstances may perhaps be prevented,

by attending to a few plain and easy directions, which we mean to give in the following chapters.

Our readers will therefore understand, that we intend to give them such instructions as may effectually answer their purposes in cases of common and ordinary accident, unattended with any critical or dangerous circumstances; and even in such cases, to offer some hints for management, till the help of a surgeon can be obtained, which in many parts of Great Britain, and especially the less populous provinces, may be wanted some hours before the utmost exertions of assiduity and speed can procure it.

C H A P. II.

Of Green Wounds.

THOSE wounds which are inflicted by a sharp knife, a razor, or other edged instrument, and which neither divide any considerable vessel, nor penetrate into the internal parts of the body, are not attended with any considerable difficulty in the cure; in these cases, a pledget of dry lint, secured by a bandage of soft linen cloth, will generally answer every purpose: if the effusion of blood is considerable, a

little of the friar's, or vulnerary balsam, may be dropped on the pledget.

To make the friar's balsam,

Take of gum Benjamin in powder, three ounces
—of balsam of Peru, two ounces—of hepatic aloes powdered, half an ounce. Infuse these ingredients in a quart of rectified spirit of wine for three or four days in moderate heat; at the end of this time strain it off fine.

And

And in this place it may be right to caution our readers against the vulgar practices of applying greasy plaisters, ointments, bruised herbs, and a thousand other kinds of noxious dressings to the wounds which we now describe; not one of these is calculated to benefit the wounded person, but most, if not all of them, are likely to do him injury. The most simple applications are certainly the best; and, as we have already observed, slight wounds are in general cured without any other remedy than dry lint, and guarding them against the air by a bandage.

But if the wound hath been occasioned by any such accident as may have introduced any foreign body into it, such as hair, dirt, bone, parts of weapons, splinters, bullets, glass, rags, or waddings of tow or paper, the wound should be carefully examined, these unnatural bodies extracted, the coagulated blood taken away, and the whole thoroughly cleansed, before any dressing is applied. Yet this must be done cautiously, and with due regard to the situation of the patient; for, in some cases, and in particular when the effusion of blood has been so considerable as to weaken him, it may be attended with much danger to fatigue or exhaust the patient farther, till he has had some rest; and in that case it will be right to bind up the wound for the present, and proceed to the examination of it when the patient's strength is in some measure recruited.

And, indeed, in some instances, foreign bodies are lodged in such a way as to render it difficult to extract them immediately; yet they are afterwards loosened and discharged spontaneously as the wounds digest: and in other cases they remain years, nay, even during life, without being inconvenient, or producing any dangerous consequences.

And in extracting bodies which have penetrated deep in the fleshy parts of limbs, and have passed through great vessels and

nervous parts, and the opposite parts are equally full of veins, arteries, or nerves, or a bone is interposed, the foreign substance is recommended to be taken out the same way it entered; but if it hath passed the bone, and no difficulty arises from the intervention of the vessels or parts just mentioned, it hath been thought adviseable rather to facilitate the extraction on the opposite side by incision, than to tear and disturb the parts it went through, by drawing it back. But this depends so much on particular circumstances, and requires so much judgment to determine, that it is in most cases prudent to suspend all endeavours to extract such foreign bodies as are buried deep, or strongly retained, till proper assistance can be had.

If the wound is in the head, or any other part of the body which is covered with hair, it will be right to have it shaved, that it may not obstruct the application of medicines; and the clotted blood may be removed with a sponge, dipped in warm red wine and water; but if the wound is deep, and there is danger of a fresh flow of blood, this had better be left to be separated and thrown off by digestion.

In some instances, where any of the larger blood-vessels are lacerated or cut, the immediate discharge of blood may be so great as to call for some endeavours to stop it, even before the arrival of a surgeon; and this may generally be done by an occasional tourniquet, if the wound is in a limb, and which may be made in the following manner: Take a broad ribband or fillet, and binding it loosely two or three times round the limb, a little above the wound, sew the end strongly; under this bandage introduce a smooth round stick about eight inches long, and of thickness sufficient to bear being twisted round till the stricture stops the blood; in this position it may be secured till assistance can be got: but particular care must be taken not to strain this bandage after the blood ceases to flow, which

which may occasion inflammation, and consequent mortification.

But where this stricture cannot be applied, other methods must be taken to prevent the loss of blood from proving fatal; for this purpose a great variety of styptics and astringents have been advised, and among them the following:

Take blue vitriol and alum, of each one ounce and a half; dissolve them in one pint of boiling water; strain off the liquor, and add to it half an ounce of oil of vitriol. Shake the whole well together.

If these ingredients are not at hand, the blue vitriol, in somewhat larger quantity, dissolved in water, may answer the purpose; and if even this cannot be had, rectified spirit of wine may be tried.

Agaric of the oak is also recommended, and in many cases has proved successful, when other applications have failed; and as it is easily procured, and may be kept ready for use in every family, we shall give the directions of a very ingenious physician, though of a foreign country, for gathering and preparing it for use, and applying it.

Gather in autumn, while the fine weather continues, the agaric of the oak, which is a kind of fungous or excrescence issuing from the wood of that tree. It consists at first of four parts, which present themselves successively: the outward rind or skin, which being useless, may be thrown away—the part immediately under the rind, which is the most valuable; and this being beaten well with a hammer till it becomes soft and very pliable, which is the only preparation it requires, is to be applied in a slice of a proper sizedirectly over each of the wounded blood vessels; and having constricted and brought the divided parts of the vessel together, and stopped the bleeding, generally falls off at the end of forty-eight hours; but in the mean time must be secured by a bandage, applied so tight as to prevent it's slipping from the wound—the third part

of the agaric which adheres to that last described, is of very inferior quality, but may serve to stop the bleeding of the smaller blood vessels—the fourth and last part being reduced to powder, may conduce to the same end. The same writer is of opinion, that where agaric is not to be had, sponge used in the same way, will produce nearly the like effects.

If the wound is deep, and more especially if it has been inflicted with a blunt weapon, and the edges of it are unequal, it must be kept open till the bottom is cleansed, that the flesh may grow up on the sides, without which it would increase too fast, the orifice close, and the matter and filth lodge within; from whence would ensue pains, inflammations, abscesses, and ulcers; for this purpose, tents or pledgets of lint must be used, according to the figure of the wound: but particular care must be taken that they are neither too long or too large, and especially if the wound is in any nervous part, as they would in that case inevitably occasion acute pain, and irritate the nerves: as the wounds heal, this external dressing must be lessened in size and length by degrees, that the flesh may have liberty to grow; and these pledgets or tents may be kept in their places by a plaister of the following simple composition.

Take of yellow bees-wax, six ounces—of nut-ton suet, four ounces—of white resin, three ounces. Melt these ingredients together, stirring the whole till it is smooth.

If the wound made with a sharp edged instrument be in a limb, and longitudinal, it may be kept together by the compression of a bandage; but if it be in the face or body, or received in a transverse or diagonal direction, the lips must be brought together, and secured by stitches with a needle and thread, or silk; but this is an operation which should be performed by a skilful surgeon, and great care is also necessary to take out the stitches as soon as the sides
of

of the wound adhere, and particularly in the face, where the continuance of them for any considerable length of time will be apt to occasion scars; but this may indeed be avoided by the use of another kind of compression, which is formed by narrow strips of thick linen, spread with some strongly adhesive composition, and laid across the wound, at distances not exceeding a finger's breadth.

After the blood has been stopped, and the wound brought together if necessary, a pledget of dry lint laid over it, is perhaps the best dressing that can be applied; and if there is no suspicion of any remaining dirt or foreign matter in the wound, it may continue unchanged for eight and forty hours, at the end of which time this first dressing may be removed, unless it sticks so close as to endanger a renewal of the hæmorrhage, or to give considerable pain; in which case, the sides and external surface of the pledget may be well wetted with a feather dipped in oil, which will probably bring it away at the next opening: but if this should fail, and it becomes absolutely necessary to get at the wound, the part may be bathed or immersed, if it's situation admits of this expedient, in warm milk and water, which will answer the double purpose of removing the dressing and cleansing the wound.

The first dressing removed, the second should be of the same kind, which may be changed in twenty-four hours, and so continually till the wound is healed, which will happen in a very few days without any other application, if no unusual or unfavourable symptoms occur.

But if any considerable degree of inflammation, pain, or uneasiness, should take place, it will be necessary, instead of the wax plaister above recommended, to lay over the pledget of lint a poultice of white bread and milk moistened with a little sweet oil, and to continue this application till these disagreeable symptoms are removed;

and if as the wound closes, or on the supuration, any fungous or proud flesh should appear, it may be touched with a bit of blue vitriol, or a small quantity of red precipitate powder, of alum burnt and powdered, or finest loaf sugar powdered may be mixed with a little yellow basilicon, and a doffel or pledget, according to the situation of the wound, spread with it, and applied, will seldom fail to keep it down.

The treatment of the wounded person as to regimen, must depend on the nature, magnitude, or danger of the wound, and the habit of body and constitution of the patient; it is, however, necessary, in all cases where the wound is considerable, or has been received in any part of the body where the cure may be apprehended to be difficult, to keep the patient low, both as to food and liquors, and to prevent fever and inflammation by bleedings repeated as often as circumstances may direct, and by keeping the body open with gentle laxatives; but both the evacuations of bleeding and purging must be regulated by the nature of the case, for where the hæmorrhage has been great, or the patient is of a thin and weak habit, these evacuations may not only be unnecessary, but dangerous.

A recumbent posture has also been particularly recommended for wounded persons, who should be kept equally free from agitation of body and mind; all violent bodily exertions, and the indulgence of any of the tumultuous passions, are alike dangerous. Green wounds are in themselves easily cured, if no great vessel be lacerated or divided, and none of the vital parts are hurt; but if any degree of fever or inflammation is brought on by acts of imprudence, they are often attended with very serious consequences.

And of all wounds, the cure of those which are inflicted on the less fleshy or muscular parts of the body, are the most tedious and difficult of cure; if the periosteum or membrane which covers the bone

is wounded or bruised, external inflammations, abscesses, and a train of unfavourable circumstances frequently ensue, attended with severity of pain, and not uncommonly with caries or rottenness of the bone itself: on such occasions, the utmost care should be taken to guard against these consequences, by early application to poultices, keeping the body still, the mind undisturbed, and a strict attention to regimen.

Though it is by no means our intention to treat particularly on gunshot wounds, because those who are exposed to such accidents have in general the assistance of surgeons, whose qualifications have been examined into and approved; yet it may not be unuseful to remark, that the foregoing part of this chapter being duly attended to, will suggest all that can be done on such occasions, short of manual operations: care in examining such wounds, and removing all foreign bodies, keeping them perfectly clean, and applying simple and easy dressings, are the great rules on which the cure of all green wounds, however inflicted, depend; and a due attention to these will supply, as far as is possible, the want of chyrurgical assistance.

We have, in a former part of this work, treated of the tetanus or locked jaw, and other spasms, convulsions, and strictures, occasioned by wounds, bruises, scratches, and punctures; and directed proper management and medical treatment, when accidents of these kinds are followed by such dreadful effects: but it is necessary in this place to remind our readers not to slight the smallest injuries that can be sustained by the human body; because, however trifling they may at first appear, they are capable of producing the most excruciating pains, and the most desperate diseases to which mankind is liable; to avert which, it is always adviseable to attend to any little accident the moment it has happened, and

by proper applications to render these fatal consequences less probable.

Punctures in particular, though so slight as scarce to have been noticed at the time they have been made, have been productive of the most fatal events, and though a simple puncture of the skin, or even the flesh, where the patient's habit of body is good, will seldom require any other application than the blood which follows it to heal the breach; yet if any of the membranes or tendons should be wounded, the consequences may prove serious, and those slight festerings, which sometimes follow such accidents, may end in extreme danger. If any pain, swelling, or inflammation, follows the prick of a pin, needle, thorn, or other pointed instrument, it is always right to apply a softening poultice immediately, which will in general prevent farther mischief.

But these accidents are sometimes aggravated by parts of these small and pointed weapons being broken and left in the wound, and the consequences which may arise from such circumstances, cannot be better exemplified than by the following case.

C A S E I.

A Maid servant, as she was stooping to scour some chimney furniture, felt something prick her on the outside of her leg, just above the ankle; and examining the place, perceived a speck of blood, but took no farther notice, apprehending some pin hanging in her petticoat had pricked her; and though the part sometimes gave her pain, and occasioned her to limp, yet she followed her business for two or three months; at the end of that time, however, she was seized with the cramp, as she described it, about the calf of her leg, and an almost continual twitching in the membrane

brane of the muscles; this obliged her to keep her leg up for some weeks, and then a tumor appeared on the back part of the limb, which alarming the family with whom she lived, and who regarded her as a faithful servant, they procured her admission to an hospital, where proper means being taken to promote a suppuration, an abscess ensued, which being opened at a proper time, and the matter discharged, was soon healed, and the patient was discharged from the hospital cured, and returned to her service.

But about six months after, she began to feel the same pricking pain higher up in the same limb, which grew so troublesome, that in walking any considerable distance, she was obliged to stop several times for a minute or two at a time, and if she attempted to kneel, the same sensation became so acute that she could not endure it without crying out.

At length, the uneasiness increasing, she imagined she felt somewhat deep under the flesh, on the inside of her thigh a little above the joint of the knee, and under this persuasion applied to a surgeon, and stated her apprehension that she had somewhat foreign in her thigh; and the surgeon proceeding to examine, plainly perceived with his fingers the point of some hard body, like that of a pin or needle, and having got proper assistance, he proceeded to cut down upon this substance, making an incision half an inch long, and of the like depth, when introducing his finger he could touch it, though, the pain occasioning the patient to change her position, he soon lost it again; however, having forced up the flesh and cleansed away the blood with a sponge, he could not only feel it as before, but withdrawing his finger, it was actually perceptible to the sight.

He now endeavoured to lay hold of it with the forceps, but the body was so slippery that this instrument would not hold it; however, with a small pair of nippers

from a pocket case, he at length got fast hold of it, and drew out about an inch in length of a rusty needle. After this the wound healed speedily, and the girl remained perfectly free from all future complaint.

Extraordinary as it appears, that a needle entering the flesh below the calf of the leg on the outside, should at the distance of a year, when even the remembrance of the first complaint was almost lost, be taken out on the inside of the thigh, which could only be effected by the working or motion of the muscles, favouring it's ascent and winding with it in it's passage; yet this is by no means a singular case, many of the like kind are recorded, as well in the works of medical writers, as in the Philosophical Transactions, all which serve to shew the necessity of examining a wound with strict attention, in order to prevent the possibility of it's healing over some foreign body, which might be productive of future ill consequences.

Another circumstance of a somewhat similar nature, happening within our own knowledge, we shall mention it as a proof how much this necessary caution of examining wounds is apt to be neglected, or how little attention is paid in the pretended observance of it.

C A S E II.

SOME young gentlemen, who had been taking the diversion of shooting, stopped in their way home at night, to take some refreshment at a public house, and observing the man who kept the house open a cupboard in the room where they sat, take a bottle out, carry it into the next room, and soon after return it to the cupboard, which he left unlocked; either curiosity, or a suspicion that it contained some better liquor than he had offered this company,

pany, induced one of them to take out the bottle, as soon as the man left the room, to examine it's contents; and as he brought it to the candle for that purpose, and inclined it to it's side for inspection, a few grains of the gunpowder, with which it was unluckily filled, fell into the candle, which taking fire and communicating to the whole quantity, the bottle burst with a terrible explosion, wounding the gentleman who held it, and one or two others.

Among other wounds, he who had the bottle in his hand, received one so considerable in his neck as to occasion a great loss of blood; and a surgeon being sent for, he used means to stop the hæmorrhage, and this with the other wounds soon healed, but not without leaving a very hard lump of considerable size within the skin, which passed for some time, as the cicatrix which had been occasioned by the laceration of the vessels, and the inequality of the lips of the wound, as well as the contusion, both which must happen from the nature of the substance with which it was given, and the force with which it was inflicted.

However, after the young gentleman had been for some time engaged in the most active scenes of public service, he discovered accidentally that the knob in his neck could not be a scar, as it was easily moveable under the skin, and shewing it to a military surgeon, he was convinced that a piece of the glass bottle had been lodged

in his neck, and then remained there, but as it was at that time attended with no inconvenience, the surgeon advised him not to have it extracted, though he was of opinion it might be done at any time without danger.

After this it continued undisturbed, and without being troublesome, for several years longer; but at length the part grew somewhat painful, when it was opened by a skilful surgeon, and a piece of the glass bottle, nearly of the size and figure of a tamarind-stone, was taken out, and the wound healed, without farther inconvenience.

Upon examining this piece of glass after extraction, the edges of it on all sides were found perfectly blunted and obtuse, which must have happened in the explosion, as it is impossible to account for it's suffering any change after it had been lodged in the patient's neck.

To what has been said on the subject of green wounds, it may not be improper to add a recommendation to such of our readers, as may have occasion to travel by sea or land, unaccompanied by a surgeon, to provide themselves with a phial of Friar's balsam, a little of the sticking-plaister already mentioned, and a proper quantity of lint, and soft linen for rollers and bandages; a provision, which will generally be effectual for the relief of such lesser accidents as commonly befall the traveller.

CH A P. III.

Of Tumors and Abscesses.

A Tumor (we speak of an external one only) is an unusual and unnatural swelling or protuberance of the flesh on any part of the body; and is usually de-

scribed as a disease in which the parts of the body recede from their natural state, by an undue increase of their size.

Different names are given to tumors according

according to their situation, form, and contents; and these general names are again subdivided into distinct species, so that a tumor which contains matter is called an abscess. When the matter is contained in a bag, it is said to be an encysted tumor, and the like. *Ædematous* tumors are such as depend on other diseases, and may be said to be symptomatic or critical, as they generally disappear with the original diseases.

It is of those tumors which contain matter, and which are properly termed abscesses, that we mean to treat in this chapter, and these generally follow a certain degree of inflammation, and are seated in the cellular membrane.

The matter which collects in abscesses, is formed by the heat of the inflamed part, both acting on the humour gathered there, and dissolving the adjacent fat; and the same heat serves to prepare those two fluids for being discharged.

If this inflammatory heat continues to increase for two or three days, notwithstanding the usual means are used to remove or lessen it, a suppuration may be expected to follow; and frequent shiverings will point out the time when the formation of matter is actually commenced.

Abscesses on the external parts of the body generally begin with a heat and tension, or stretching of the skin, and the bulk of the part speedily increases, becomes discoloured, and is attended with pain and additional heat: a pulsation is now felt which continues till the matter is wholly formed, and is generally accompanied by a fever increasing towards the evening, and proving most troublesome in the night. When the contents of the tumor or abscess are in a compleat state of suppuration, the shooting acute pain abates, and an itching, a numbness of the part, and a sense of great weight takes place; the part at last yields to the touch, and grows soft, and the skin being distended to

it's utmost stretch, breaks, and an opening is formed for the matter which it inclosed.

Very severe and unpromising symptoms in some cases attend the progress of an abscess: the patient feels a difficulty of breathing, a total loss of appetite, and an interruption of rest; the matter which is discharged, when it breaks, is greenish, thin, and offensive to the smell; the wound is filled with fungous or proud flesh, and blood often bursts from it; the patient is frequently taken with faintness, and especially whilst the dressings are changed: and under these circumstances danger may be apprehended, and it will be prudent to call in proper assistance, if it can be procured.

But the ordinary progress of abscesses is unattended with these alarming symptoms; the pain, fever, and disagreeable circumstances, vanish or abate very considerably as soon as the matter is formed, and when it is discharged by proper treatment and due applications, the wound heals without farther inconvenience; and a dose or two of slight opening physic compleats the cure of this disease.

We have already, under the head of inflammations, pointed out the proper and safe methods to be used on the first external appearance of inflammatory symptoms, in order to remove these complaints and disperse the swelling; but after the formation of matter has commenced, which from the foregoing account of the symptoms will be easily discoverable, all repellents and spirituous applications must be laid aside, and proper means must be pursued to promote the suppuration.

To this end, such applications are to be made to the tumor as serve to moisten and gently stimulate; and for those purposes the common poultice of white bread and milk, with a small quantity of sweet oil, the latter answering the double use of lessening the tension and obstructing the pores;

and by that means preventing the passage of the finer parts in their attempts to escape through the skin, is in general the best that can be applied; seldom failing to produce the desired effect, and being preferable to most others on account of it's cleanliness and freedom from offensive smells: this poultice must be laid on warm, and renewed so frequently as to keep up an equal heat. If this application, however, should not hasten the suppuration sufficiently, a small quantity of chopped onion, or lily root, may be added; a little yellow basilicon, or of the purest gum galbanum. When the progress of the tumor is slow, and unattended with any considerable degree of pain, a plaister of purified gum galbanum laid on the part, and renewed once in three or four days, may be sufficient; or, if necessary, the whole may be covered with a warm poultice, and this changed twice in the twenty-four hours.

And during the advancing state of the tumor or abscess, due regard must be paid to the patient's regimen in all respects: if the progress is rapid and accompanied with heat and fever, a low and cooling diet will be necessary, and bleeding may be proper; and though purging is by no means advisable, yet it may be requisite to keep the body open by gentle clysters; but these should only be used in case of actual costiveness. If the patient is of a cold low habit, and the suppuration is retarded by a deficiency of heat, cordial medicines, and a more generous diet, may be absolutely necessary.

Before any discharge is admissible, the whole, or very near the whole contents of the tumor must be converted to matter, for if it be opened whilst any part of it remains unsuppurated, that part will not digest without difficulty, and will perhaps degenerate into a thin, acrid, and obstinate humour; on the other hand, if the opening be deferred after it is in a proper state for a

discharge, the matter may putrify and form a fistula, or be absorbed and occasion a hectic fever. When the skin on the most prominent part of the tumor appears thin, when the matter perceivably fluctuates on a very slight pressure; and when, as has been already observed, the heat, pricking pain, and throbbing cease, or abate very considerably, it may be opened without hesitation: and as nature frequently assists at the critical moment, it is certainly right not to be too forward in procuring the discharge, more especially as it is allowed that very little of the morbid matter is deposited in tumors before they are fully ripe, and by a premature discharge, a risque is incurred of having a foul ulcer difficult to be healed.

But when an opening must be made by art, the choice remains between the knife and caustic; the former is to be preferred when the instrument is in skilful hands, as both less painful and more expeditious: but if the tumor be in a part of the body where any nerve, vein, or artery is in danger, this operation ought not to be attempted by any but a surgeon well acquainted with the structure of the human body; and the only direction we can attempt to give is, that the incision should be made on the lower side of the abscess, as most favourable to the present and future discharge of the matter.

Some particular tumors, such as venereal buboes, and those which are of a scrophulous nature, are said to heal better after being opened with a caustic, than when the discharge is procured by incision; but the application of caustics should be avoided when the tumors are in the face, neck, or other exposed part, on account of the scar which they unavoidably occasion; nor do we apprehend they ought to be applied unless by persons of some judgment, though, in case of emergent necessity, we shall give plain directions for making and using them.

To

To make the common strong caustic,

Boil any quantity of soap-lye till three parts in four of the liquid is consumed; then sprinkle in, while the remainder continues boiling, lime which has been kept some months in a bottle closely stopped; continue to add of this lime such a quantity as to absorb all the fluid, and reduce the whole to a paste, which is to be preserved in a vessel, well stopped, till it is required to be used. The acrimony of the lime is said to be lessened by it's being kept before it is applied to the use of making caustic.

To make the common milder caustic,

Take equal parts of soft soap and fresh quick-lime, and let them be carefully and closely mixed when the composition is wanted for use. This mixture may be rendered more active or corrosive in any degree that is required, by adding a proportionable quantity of salt of tartar, or other fixed alkali; and in this way it may be brought to answer all the purposes of the stronger caustic with much less trouble.

When it is necessary to apply a caustic to an abscess, a piece of sticking-plaster is to be laid over the softest part of it, in the middle of which a hole has been cut of the size the scar is intended to be made; in that hole the caustic is to be placed or spread on such a pledget of lint as will just fill it; and this pledget is to be kept in it's place by another piece of sticking-plaster of proper extent: this caustic, which may in these cases be of the milder sort, will not occasion any considerable pain except the skin is inflamed; and the time it will take to produce it's effect, must depend on the nature of the tumor, and other circumstances; when the scar is formed, an opening may be made in it to discharge the matter, and the rest may be left to separate and come away by digestion. When caustics are used to lay a bone bare, to destroy a large gland, or to waste a considerable fungous, they are apt to occasion very violent

pain, which a very justly celebrated surgeon is of opinion may be lessened by the mixture of a certain portion of opium in the composition.

After the abscess has been opened, the first dressing may be a pledget of dry lint, covered with another of tow; and if after this any warm digestive appears to be necessary, an ointment may be composed of yellow basilicon, with the addition of a little oil of turpentine, or balsam of capivi; and the pledgets with this composition need not be warmed, unless the patient complains, and then not so much as to melt their surfaces. If the matter is good, it is not necessary to compel the patient to endure the pain of having the wound wiped clean every time the dressings are changed, which should be as seldom as the discharge will admit; once in the twenty-four hours, or twice at most, will be in general sufficient; and the less frequently the change requires to be repeated, the more speedily will the cure be compleated: but great care should be observed to lay on the applications evenly and smoothly, in doing which proper time may be taken, as the air does no injury, unless the exposure be unnecessarily protracted. The patient should be directed to lie or sit in postures favourable to the discharge of the matter, and compresses or bandages may be applied in such a way as will most conduce to that end.

After an abscess has been opened, and during the cure, particular care is also due to regimen and management: the patient should, if possible, be kept in a dry and warm, though by no means hot air; his diet should be moderate, and rather low, though regard must be had to his habit of body, and his usual custom of living in health; the less exercise is taken the better in general, though if the head or other upper part is the immediate seat of the disease, the tranquillity of the body is not so very material; but at all events the mind should be kept undisturbed, as inflammation is the certain

certain consequence of any violent mental agitations or exertions; evacuations are to be avoided during the continuance of the discharge; and therefore if the habit

should be costive, this complaint will be better relieved by clysters than purges: at any rate, nothing more than mild and gentle laxatives should be administered.

C H A P. IV.

Of Ulcers.

THOUGH when an abscess is discharged of it's contents, it is generally spoken of as an ulcer, yet the latter is to be distinguished from the former in most cases by yielding, instead of matter, a thin watery humour, so corrosive as to occasion inflammation and excoriation of the surrounding skin, by the particular hardness of the sides and edges of the wound, and by it's continuance.

Ulcers are also distinguished by a great variety of different names and descriptions; those which are hollow and have cavities beneath the surface, are called *sinuous* ulcers, and of this kind is the fistula; those whose sides are hardened as before described, are called *callous* ulcers; ulcers which affect the bones are said to be *carious*; those that discharge a thin humour, discoloured like water in which raw flesh has been steeped, are denominated *sanious* ulcers; when the discharge is more thick and glutinous, sticking to the bottom of the wound, *sordid* ulcers; and when the discharged matter is somewhat thinner but more abundant, these ulcers are said to be *purulent*.

The cure of all ulcers, except in some particulars the callous, sinuous, and carious, depend chiefly on the correction of the bad habit of body by which they are principally occasioned. If the body is free from every morbid disposition, the

healing of an ulcer is the work of nature; and all that external applications to the part can contribute towards it, is to reduce the fibres to such a moderate state, neither too lax or too rigid, as to render them most fit for the operations of this all-powerful physician. Thus a softening poultice will in general remove any inflammatory hardness, and dry lint may serve as the future dressing, unless some mild astringent should be wanting to give a tone to the new flesh, or gentle stimulatives to remedy any apparent sponginess, occasioned by too great relaxation.

In most cases ulcers are to be treated as we have directed in the cases of wounds, either from accident or from abscesses; but the great difficulty with respect to ulcers, is to determine in what particular cases and when it is right to dry them up: on this subject a great variety of judgments have been formed and opinions given, but the whole seems to depend so much on particular circumstances, as to render it impossible to offer any thing decisive on a general view.

Yet it may in most instances be pronounced unsafe to dry up in the decline of life such ulcers as have been of long continuance, during which the patient has enjoyed in other respects good health; at least, no attempt should be made to stop the discharge, till regimen or medicine, or the

the united powers of both have wrought such a change in the constitution as to produce a visible alteration in the ulcer itself, in which case it ought unquestionably to be permitted to heal without opposition.

On the other hand, such ulcers as have been produced by acute or malignant diseases, will naturally shew a disposition to heal when the causes have been removed, and in these cases proper evacuations will be necessary to prepare the way for stopping a drain kindly intended by nature to draw off morbid and offensive humours.

There are also ulcers which have been occasioned by the injudicious treatment of wounds, bruises, and contusions, the discharges from which have degenerated into a thin acrid humour, and the edges become callous from neglect or improper applications; but neither should any attempt be made to heal these without consulting the habit of body and constitution, and administering proper internal medicine.

And upon the whole, it will easily be discovered whether nature requires the drain of an old ulcer, in which case the patient will be proportionably free from other complaints as the discharge is uninterrupted, and affected with them by any occasional decrease of it; or whether it is unnecessary, and therefore prejudicial, which will appear in a wasting of the patient's flesh, a diminution of strength, and a slow continued and hectic fever.

In the former case it will be necessary to consider the patient's age, and every circumstance respecting his former and present manner of life, which may lead to a perfect knowledge of his constitution; on this information a judgment may be formed, whether it will probably admit of such an alteration as will make it a matter of prudence to heal up the ulcer, or whether the most likely way to prolong life will be to leave it open, and to pay no other attention to it than to keep it neat, clean, and

as much as possible free from offensive smells.

But when the patient's strength appears to be exhausting, and the other symptoms above described, indicate approaching danger from the continuance of the discharge, common reason will suggest the necessity for putting a stop to it; but at the same time the patient should enter on such a course of alteratives as may conduce both to render the drain unnecessary, and to restore his weakened constitution.

And in both cases, a strict though somewhat different regimen is to be observed with equal attention; those who retain their strength and health in other respects should use constant though not violent exercise, abstain from high sauces and salted and spiced meat, omit suppers, and drink little wine, and no spirituous liquors; animal food should be used sparingly, and vegetables in great variety substituted, and the body should be kept open by fruits and cooling laxatives. Those whose strength is exhausted, and their health impaired, may indulge in rather more food of the animal kind, consisting however of young and white meats; drink now and then a glass of generous wine, and eat suppers of biscuit with raisins, or other dried fruits; observing, however, the precaution of keeping the body open, and yet avoiding strong or heating purges.

The sea-water used externally and internally, and lime-water in the latter way, have been each recommended strongly to those who are afflicted with old and obstinate ulcers; and we have seen very good effects produced by persevering in a course of the former. Some writers also advise the sublimate mercury in brandy, as prescribed in venereal cases, and to wash the sores with a liquid of the same kind but of superior strength; nor is it at all improbable that this medicine may be used in these cases with success, though we apprehend

it should not be persisted in whilst the patient is affected with any considerable degree of fever.

As ulcers in the legs are the most common and frequently the most troublesome complaints of this kind, it may not be amiss to take some little notice of these disorders, more especially as the treatment and management of them is frequently misunderstood.

In some cases those who have laboured under these complaints have been confined to their beds, and measures taken to skin over the wounds and effect an apparent cure, which have either thrown back the morbid humours and brought on some acute and more dangerous disease, or as soon as the patient has betaken himself to his usual employment, the same or other ulcers have burst out and continued to discharge an equal or greater quantity, frequently in two or three different places instead of one; or the patient has been told that his life depends on keeping open the drain, and that it

ought rather to be encouraged than lessened. It is not improbable that the judgment in both cases may be equally erroneous: these ulcers are generally most firmly and perfectly healed, when the patient continues the use of moderate exercise during the course of the cure; and, under proper management, the cure may be attempted in most cases, except such as we have already mentioned.

If those who are troubled with ulcers in their legs, expect permanent relief, without medicine and without conforming to regimen, they will find themselves grievously deceived; all the pretences of quacks and empiric's to cure these ulcers by external applications alone, are calculated to mislead their patients, and pick their pockets. Under the directions we have already given, with the addition of a strait stocking or bandage, these disorders may in time be removed; and under these directions the cure of them may at all times be attempted with safety, with the exceptions already made.

CHAP. V.

Of Burns and Scalds.

THE former of these injuries is received from solid substances heated to a degree so much superior to the natural heat of the body as to destroy many of the small vessels which connect the skin and cuticle or exterior covering of it together, coagulate the juices, and form a hard and dry eschar; and the latter from water or other fluid boiling or near upon boiling, which being applied to any part of the body, ruptures many of those small vessels from whence the humours are extravasa-

ted, and being collected together, raise the cuticle into a blister.

But there is no material difference between burns and scalds, as to the consideration of cure; and the danger attending each is proportioned to the degree in which the injury is sustained, the part where it is received, the symptoms which ensue, and the habit and constitution of the patient.

The different degrees of burns and scalds may be divided according to their effects, into such as produce only a redness in

in the part, attended with heat and pain; when the pain and heat are accompanied with blisters; when the skin and fat are so burnt as to form a crust or eschar, and when the flesh is consumed to the bone.

In the first case the cure is always at hand to those who have resolution enough to endure it; the burned or scalded part, if it is not blistered, is to be held as near the fire as it can be borne, and continued there as long as the pain can be suffered; when it becomes intolerable, it must be removed, and presented again as soon as the extreme anguish is moderated; and proceeding in this way, the stagnant juices occasioned by the too violent heat of the burn or scald are resolved, and returning into the circulation, blisters are prevented.

Those who cannot submit to this method of preventing farther mischief, on account of the immediate pain with which it is attended, may in slight cases dip linen rags in cold water and apply them to the part, removing them and supplying the place with others the moment they become hot or dry, and continuing this course till the part ceases to be painful; where the injury is of a more serious nature, the like application of brandy or spirit of wine is preferable; and upon the abatement of the pain, camphorated spirit of wine may be substituted. Some advise a mixture of oil with the spirit, especially if the part injured is membranous or tendinous, lest the spirit should crisp the part too much, and occasion contraction.

Many other applications are recommended for slight scalds and burns, before any pustules or blisters are arisen, such as vinegar and salt, in the proportion of a handful of the latter dissolved in a quart of the former; brine in which cabbage hath been pickled, olive pickle, white of egg beat till it becomes thin, oil of turpentine, any other cooling oil or liniment, and in particular the following:

Take equal parts of fresh drawn linseed oil and lime-water; shake them well together, till they incorporate and form a liniment. This mixture may either be spread on pledgets of lint or linen rags, or it may be laid on the injured part with a feather three or four times a day.

When, however, none of these applications can be made early enough to prevent a blister or pustules, but that one of these symptoms hath actually taken place, emollients are required to relax and soften the hardened and stretched skin, and to admit a return of the circulation; if the cuticle, or exterior covering of the skin is only raised in blisters, the whole blisters, as well as the surrounding parts, should be frequently touched with a feather dipped in fresh linseed oil, or salad oil, and a plaister of white ointment, or white camphorated ointment, should be laid over them.

To make the white ointment,

Take of olive oil half a pint—white wax and spermaceti, of each one ounce and a half. Melt these ingredients with a gentle heat; and keep the whole stirring constantly and smartly, till it is cold.

To make the camphorated ointment,

Rub a dram of camphor with a small quantity of oil, and add to the above in stirring.

If the blisters are of considerable height or extent, they should be snipped with a pair of scissars towards the lower side, to discharge the acrid humours, and prevent it's corroding; but the external coat should not be taken away. After this the circumference of the blister should be lightly touched with any cooling oil, as far as it appears inflamed, and the whole covered with a plaister of the white or camphorated ointment.

If an eschar seems likely to be formed,
or

or digestion appears necessary, the dressing should be either with yellow basilicon and the white liniment mixed in equal parts, or with a like mixture of yellow basilicon and epulotic cerate.

When an eschar or crust is actually formed, such treatment will be necessary to produce suppuration and digestion, and to keep down fungous or proud flesh and promote a cure, as has been already directed under the head of *Wounds*.

But if the injury hath been received in the face or other exposed part, every thing must be avoided which might increase the scar; and to this end emollients should be applied on linen cloths, folded perfectly smooth: during the first three or four days, when the part is dressed, a common emollient fomentation may be used, with the addition of about four ounces of the camphorated spirit of wine to a quart of the liquid, and this may be continued till the separation of the crust, if it should not be effected in the time we have mentioned; though, if that delay should happen, it will be proper to make an opening in the crust to discharge the matter underneath. As the wound heals, the apprehensions of a scar may be lessened by exposing the part frequently to the steam of hot water, and covering it with a soft wax-plaister.

When the flesh is burnt away and consumed to the skin, the wound must be treated as in the degree last described, of which

this may be considered as a more aggravated case; and if it can be brought to suppurate and digest, a cure may be effected and desperate operations avoided. And, in cases where the burnt parts become livid or black, some are of opinion that it is necessary to bathe them with camphorated spirits of wine, tincture of myrrh, and other antiputrescents; though it is more generally understood to be adviseable to use emollients only, unless actual symptoms of mortification are exhibited, when it will be also necessary to accompany these applications with the internal use of the bark, and other antiseptic medicines.

And when the burn or scald is violent or extensive, and the inflammation threatens to run high, bleeding will be necessary, a low diet both as to food and liquors, and laxative medicines sufficient to keep the body open; and this is more particularly requisite for infant subjects.

The patient should also drink plentifully of cooling and diluting liquors; and if any tendency to fever appears, the following is recommended as preferable to most other drinks.

Drop from ten to fifteen drops of spirit of sea salt into half a pint of water in which toasted bread hath been infused, and let this draught be repeated every second, third, or fourth hour, according to circumstances.

CHAP. VI.

Of Contusions or Bruises.

WHEN any part of the human body has sustained a contusion or bruise, either the small blood-vessels of the contused part are lacerated and torn, and the blood which they contained is spread about

the adjacent part; or without such an effusion of their contents, these vessels having lost their tones or active force, no longer contribute to the circulation, and of course their contents stagnate and become morbid: both

both those cases frequently happen together; but in either, if the impediment is not speedily removed by nature, or with the assistance of art, an inflammation ensues, and the consequence may be an unkindly suppuration and a mortification. Particular injuries done to the nerves, the larger blood-vessels, or the bones, are marked with peculiar symptoms.

Contusions on the fleshy parts may also bring on palsy; or a contraction, on a large nerve, a palsy, an atrophy or wasting of the flesh, incurable numbness or insensibility of the part injured, and a gangrene in the extremities of the limb below it; and this effect may more particularly follow bruises or contusions of the spinal or back bone, and the marrow which it contains. Contusions of the internal parts frequently prove fatal, as they are not within the reach either of certain discovery or of proper applications.

In order to give effectual relief in cases of bruise or contusion, recourse must be had to such remedies as will be most likely to dissolve the coagulated fluid, and restore the tone and action of the vessels.

To this end, when the skin is not broken or destroyed in any considerable degree, a mixture of two third parts water, and one of strong vinegar, may be warmed, and the part fomented with linen cloths wrung out of it, and renewed as they grow dry: in slight cases, and when the intention is to restore the tones of the fibres, a small quantity of spirit may be added to the vinegar and water, or the fomentation may be an infusion of camomile flowers; and the cloths, as they are wrung out, may be sprinkled with camphorated spirit of wine.

If the skin is broken, or a wound accompanies the bruise, a poultice may be necessary; in which case, the common one of bread, milk, and oil, is said to be the best, though some recommend boiling the

bread in vinegar and water, and adding to it the flowers of elder and camomile; and others, a cataplasm of new cow's dung, with the particular virtues and efficacy of which we are however unacquainted.

If the bone is affected with the bruise, it will naturally follow that the part which has suffered injury must exfoliate or scale off before the wound can be healed; and even when the bruise is so violent as to destroy a considerable quantity of the substance, an ulcer of a very obstinate nature frequently ensues, attended with very disagreeable symptoms.

But even in these cases, a rational pursuit of the measures advised in cases of other wounds, simple dressings, consisting of innocent ointments, and covered with common milk and bread poultices, or such others as we have already described, will in general effect a cure; for when the diseased part of the bone is thrown off, and the contaminated part of the flesh is separated and brought away by digestion, both which will happen under proper treatment, little difficulty will be found in healing the wound.

Yet medicine and regimen are both necessary in case of a violent bruise or contusion; the patient should be bled as soon as possible after the accident, his diet should be low and cooling, and proper means should be used to keep his body open, either by laxatives or clysters: as soon as the patient is capable of bearing it, he should use gentle exercise; and when the pain and danger are at an end, purges of a more active nature are adviseable; and for this purpose the volatile tincture of aloes is particularly recommended. To make which—

Take of the species of *hiera picra*, one ounce;
of sweet spirit of sal ammoniac, or spirit of
sal ammoniac made with quick-lime, one
8 U pound—

pound—make a tincture. The dose must be proportioned to age, strength, and circumstances; but from one table-spoonful to two will generally answer the purpose.

The species of *hiera picra* consists of four parts in five of the gum of succatrine aloes, and the fifth part of Winter's bark, mixed and finely powdered.

CHAP. VII.

Of Ruptures.

THE treatment of these diseases is in general so difficult, and the directions which we can give on the subject so little likely to be followed with success, unless chirurgical skill is added, that we shall barely mention the nature of them, and the probable means of affording relief in the early attacks of these complaints, and before any aggravated symptoms have taken place.

Ruptures most commonly happen to children, and to persons advanced in years, and both in consequence of some sudden effort; in the former it may be produced by violent fits of laughing, crying, coughing, or retching; and in the latter, by any violent exertion of strength in running, walking, leaping, or raising extraordinary weights, by which part of the intestinal contents of the belly are forced through the interstices or openings left between the tendinous spreading of the muscles on that part, for the passage of nerves and blood-vessels, and a tumor is formed externally.

Could the parts, which have by this means changed their situation, be immediately returned and kept in their proper place, the disorder would cease of course; but when they are permitted to continue in a preternatural situation, they are pressed upon by the tendons, through which they pass, and the circulation of the blood being obstructed, inflammation and mortification soon follow.

As the obstacle to the reduction of the

contents of the tumor is the increased bulk which it has acquired from stricture, by which these contents become incapable of returning through the passage by which they escaped, it appears that when assistance is called to the patient in time, the return of the protruded parts must be attempted by such means as cause the vessels to contract, diminish the bulk of the solid parts, and repel the fluids, such as cold stimulating and astringent applications, and Goulard's saturnine water is particularly recommended for this purpose: at the same time the patient must be laid in a proper posture, with the head thrown back, and the breech elevated with pillows or cushions, so that the return of the gut may be assisted by a gentle but continued pressure on the part with the fingers, or with small pieces of linen cloth folded; and by a continuance of these efforts, hopes may be entertained that the vessels will become less distended, the swelling more loose and pliable, and that at length the stricture may give way, and the disorder be removed; but if this happens, the return of it must be prevented by a proper bandage or truss, which may always be procured from persons who have made the invention and sale of different kinds a considerable business.

Some physicians, however, recommend a treatment very different from that which we have just described. After placing the patient in a proper posture, they direct flannels to be applied, wrung, out of an emollient

emollient fomentation, or warm water, and warm clysters of the same fomentation, with the addition of butter and salt to be thrown up; this practice, however, seems to act in direct opposition to the foregoing, and requires some reasons to support it against the opinion of others, who have contended that emollients are absolutely to be avoided, as they cannot relax the tendons, but may, and often do enlarge the bulk of the rupture, and render the reduction of it difficult, if not impossible.

When accidents of this kind happen to children, the reduction of them is not attended with the same difficulty as with grown persons; the posture we have already described will sometimes occasion the return of the gut without any assistance, or it may in most cases be easily put up with a

slight pressure: in either case, it may be secured for the present by a piece of sticking-plaister laid over the part, but a bandage must be procured with all possible expedition, and the return of the complaint must be prevented by keeping the child undisturbed, and as much as possible unmoved, till the part is healed.

Grown persons who labour under this complaint should be particularly attentive to avoid excesses of all kinds, and particularly of liquor: whatever tends to occasion inflammation is extremely dangerous; added to which, persons overpowered with drink are liable to so many accidents, that they can hardly escape blows, bruises, and contusions, the smallest of which happening to the ruptured part, would probably prove fatal.

CHAP. VIII.

Of Bleeding.

THOUGH of all the operations of surgery, this of bleeding is the most frequently necessary, yet it may fairly be allowed, that it is practised nearly ten times as often as it is useful; and though it is of all operations the most simple, yet we shall be justified in risking an assertion, that great numbers of lives are lost, and still more rendered miserable, by the injudicious practice of it.

The fact is, that there is not a parish, and scarce a hamlet in the kingdom, where some barber, blacksmith, or old woman, does not offer to bleed, on terms much too reasonable to be resisted, by those who consider the loss of blood as a remedy for all disorders; in which credulous set you may fairly include one half the common people of all those parts of Great Britain which lie remote from cities and great towns;

who, without regard to the nature of their diseases, no sooner feel themselves indisposed, than they fly to the operator, and without the least information on the one hand, or enquiry on the other, of the complaints intended to be relieved, the blood is drawn, the performer gets his fee, and the patient his supposed cure; and both parties are perfectly satisfied, one with having probably given, and the other received, irreparable injury.

Nor is this operation of blood-letting confined to those who are actually sick: many submit to it by way of prevention, and make a regular practice of losing blood at certain stated seasons of the year, as a security either against certain diseases to which they suppose themselves liable, or a charm against maladies of every kind.

Podalirius, a son or reputed son of the Grecian

Grecian Esculapius, is the first writer who speaks of this operation; which, he says, he performed on a princess, whose life being saved by it, her father, in gratitude, bestowed her on the physician, with a part of his dominions as her portion; from this operator Hippocrates is said to be descended, and to be the seventeenth in a lineal course; and he also bled, but not frequently: and in latter times it has been sometimes approved, and at others discountenanced, till the great discovery of the circulation established the utility of it, in certain cases, upon the clearest principles.

The pulse is in general the best guide, both to direct the necessity of taking blood and to regulate the quantity; when the pulse is full, strong or hard, bleeding will be always proper, provided this state of the pulse is occasioned by fulness of the vessels: the hardness of the pulse is not, however, to be attended to so much in persons advanced in years, because the coats of the arteries being rigid, will produce that effect in aged subjects.

Bleeding is useful in all inflammatory disorders, whether general or partial, external or internal. In fevers, such as ardent fevers, pleurifies, peripneumonies, and all the different kinds which are attended with inflammation; in intermitting fevers, accompanied with great heats, pains in the bowels, or delirium; bleeding may be proper in the intervals, or during the remission of the fits, or on the first coming on or return of the hot fit; in the small-pox, in the measles, both at the approach and decline of the disorder; in the bilious colic, to prevent an inflammation from being brought on by the acuteness of the pain; in all intestinal inflammations, as well as those which affect the throat, eyes, and other exterior parts; in the bloody flux, pains in the side and head, apoplexy, epilepsy, rheumatism, sciatica, coughs, and asthmatic complaints; in the gout, under certain circumstances; in pregnancy, during the first and last three

months, bleeding is frequently proper, notwithstanding the opinion of the ancients, that it was prejudicial in any part of that state; when the piles are evidently occasioned by fulness of the vessels, they ought to be emptied by bleeding; and a suppression of the proper discharges after child-bearing will be relieved by the same means. After concussions of the brain, and all other blows and bruises, bleeding is of essential service; and in some cases, but not all, where the vital powers are suspended by drowning, strangulation, and other accidents; but, in the cases last mentioned, when it appears necessary to draw blood, it should be done with a cautious hand, as it sometimes proves dangerous when the patient is much exhausted.

But there are cases in which bleeding will not only prove ineffectual, but highly prejudicial; such are disorders occasioned by relaxation or impoverishment of the blood, general weaknesses and ill habits, nervous and hysteric complaints, dropsies, and those suspensions of life during faintings and swoonings, which are brought on by any universal debility.

And, indeed, some knowledge and attention is not only necessary to point out the particular diseases, and the several stages of them, in which bleeding may be of use, but even to stop the current of blood, or to suffer it's flow to be continued after a vein hath been already opened; and for this purpose, in many diseases the pulse should be consulted during the operation, and the process of it discontinued, or protracted, according to the judgment that may be formed from the intelligence gained in this way.

Though some anatomical knowledge is necessary for the judicious performance of this operation, and though we do not conceive that such instructions can be conveyed to the reader as will enable him to undertake it with safety, until he has had practical experience, yet we apprehend it may be

be proper to give some hints on this subject, what we rather intend as persuasives to caution, than recommendations to try practice, without sufficient and well-grounded judgment.

The arteries are distinguished from the veins by their beating, the latter having no sensible pulsation: the blood in the arteries is of a more lively, florid, scarlet colour, more subtle and spirituous than that which is contained in the veins; and when an artery is cut the blood springs out at intervals, and does not flow in a continued stream like that from the veins. The arteries lie more deeply concealed than the veins, which are found near the skin.

Opening the veins is attended with no danger, if nothing is wounded besides these vessels; but the puncture of an artery is attended with very disagreeable consequences, the blood being stopped with extreme difficulty, and frequently bringing on aneurisms, which too often terminate fatally. When the artery lies deep, the wounding it is still more dangerous, because neither ligatures or styptics can be applied.

On the arm are several different veins, and various branches from each of these, which may be opened with safety; on the hand two, one between the thumb and forefinger, and the other between the two last fingers; on the leg and foot are also several, which may be bled even as low as the junction of the great toe with the foot.

But besides the veins in the limbs, there are others in the superior parts of the body from which blood is frequently drawn; such as the vein in the middle of the forehead called the *frontal vein*, the veins in the angle of the eye, and between the cartilages of the nose; for pains and inflammations affecting these particular parts; the veins on each side the lower part of the tongue, in severe inflammations of the throat, or violent pains in the teeth; and the jugular veins in the neck in apoplexies, or other vio-

lent seizures in the head, in inflammations of the eyes, and quinseys, or other inflammatory swellings of the throat.

And in violent head-aches, or other attacks of that kind, the temporal arteries are sometimes opened; but this must be done by a skilful hand, and the orifice made lengthways to avoid dividing their fibres, which may be attended with very disagreeable consequences.

In opening veins in the hands and feet, these extremities should be immersed in water as hot as the patient can suffer it, which tends as well to soften the skin as to raise the veins; and in order to ascertain the degree of heat which the patient can endure, the part may at first be plunged into water which is only warmed, and hotter added by degrees, till the patient complains.

The posture in which the patient should be placed for bleeding must depend on his situation, and the part in which the vein is to be opened. The operation will be most easily performed if the patient sits in a chair; but in some cases the nature of the disease does not admit of this choice, and in others the patient being subject to faint, it is necessary that he should be placed in a recumbent posture. And it is generally advised not to draw blood on a full stomach, as the faintness which it frequently occasions is apt to bring on a vomiting, which may in some cases produce disagreeable consequences.

From all that has been said, it will be inferred, that bleeding is the business of persons of skill and judgment; that however necessary the operation may be, it is extremely dangerous to admit it to be performed by such as are ignorant and unqualified; and that this danger is enhanced by the probability that under such hands blood may be so improperly drawn as to injure the patient very materially, instead of rendering service to him.

It would be an insult to the understand-

ings of those who ought to be intrusted with the performance of this operation, to suggest the necessity of proportioning the loss of blood to the age, constitution, habit, and even size, of the patient: no one can be at a loss to know that a greater quantity of blood will be contained in a large body than a small; nor will ignorance itself suggest an idea of bleeding a giant and a dwarf in equal quantities.

But it may be right to remark, that the

practice of bleeding in particular parts of the body, and those nearest the part affected, for peculiar disorders, and in particular for topical inflammations, seems rather to be a custom founded on very ancient usage, than to be justified by any well-grounded reason; whoever considers the velocity with which the course of circulation is performed, will readily admit that bleeding in any unusual part is not worth the inconvenience with which it is attended.

C H A P. IX.

Of Fractures.

THOUGH we do not mean to recommend to such of our readers as are not of the chirurgical faculty to commence bone-setters, too many unskilful practitioners of this kind being already to be found in almost every part of Great Britain; yet, as proper assistance is not always to be procured immediately, and sometimes hardly at all, some directions with respect to fractures in general, and a few hints on particular cases of this kind, may be useful in the interval after the accident and before such help can be procured; and, if properly attended to, may rescue from future misery those who are in such situations as not to have it in their power to procure surgeons at any rate, which may happen to sailors and passengers on board common merchant ships, and in other exigencies of the like kind.

Fractures receive different denominations according to the different directions, being called *transverse*, *oblique*, or *longitudinal*, according to the form in which the bone is injured. When one bone only is broken without any external wound of the skin, it is said to be a *simple fracture*; when two

bones are broken, such as the greater and lesser bones of the leg, or the like, or when a fracture is accompanied with an external wound, or a dislocation, it is called a *compound fracture*: and the power of nature is wonderful in producing a new bone, for the reunion of the separated parts is actually formed by a renewal of the organical structure of the bone itself, and not by a glutinous matter hardening into what is usually called a *callus*.

Speedy cures in fractures are not always to be promised; circumstances sometimes occur which prevent the immediate reunion of the fractured bone, which notwithstanding may unite at last: thus, when a pregnant woman meets with an accident of this kind, the cure is not always to be effected till after delivery; but this is by no means a general rule, happening only in particular cases. A bad habit of body, when it is affected with scrophulous, scorbutic, or venereal taints, may prevent the reunion of the bone, or it may be retarded by a caries or rottenness of the bone. If the fractured limb should be attacked by the palsy, or wasting of the muscular parts, the cure is doubtful; at best, it can

can only be expected to be slow: if the particular part is afflicted with an old ulcer, it seldom or ever unites; and fractures in those bones which lie near the brain, the spinal marrow, or the intestines, are attended with extreme danger.

If a surgeon should be called after the swelling hath commenced, or a violent inflammation is come on, the extension of the limb must be deferred until they are removed; but if these symptoms are slight, the extension will prevent their increase. If there is a wound, all foreign matters should be removed at the first dressing, if it can be effected; and all strictures and ligatures made easy; if the wound is too small, it should be dilated, and if possible this should be done before inflammation comes on, for then the parts become more sensible. If it can be contrived that the matter may have a depending discharge from the wound, all danger from absorption will be avoided; but this must be done without altering the relaxed part of the limb, which is of such importance, that hardly any thing should interfere with this particular. If a bone is thrust through the skin, it is better to saw off a part, than to permit the matter to lodge so as to be absorbed; this operation is but very little troublesome to the patient, but the lodging of the matter is extremely so. If a dislocation accompanies a fracture, this should be reduced first, and afterwards the fracture; though if the fracture is very near the head of the dislocated bone, the fracture must be reduced, and the bone united, before any attempt is made on the dislocation.

When a simple fracture happens, it must be reduced, and the limb laid easy as soon as possible; then a cataplasm of oatmeal, oil, and vinegar, is to be applied; or, as a substitute, a plaister of white cerate. The bandage with eighteen tails is the best both in simple and compound fractures; it is more commodious than the roller, as it allows of viewing the limb with-

out disturbing it. At the conclusion, if the leg is in a swollen state, the laced stocking is the best, and rubbing it daily with the flannel, or a flesh-brush, will restore the plumpness of the calf.

Compound fractures are often attended with mortification; but this should not hasten to amputation. As soon as any tendency to this symptom appears, an antiseptic fomentation, in which sal ammoniac is dissolved, should be made use of, and the wound dressed thrice a day, the part being wrapped up with the cataplasm of cumín; bladders of warm water, one-third or half full, should be applied to keep up a proper warmth from dressing to dressing; besides these, the bark joined with rhubarb may be given; or, according to circumstances, with nitre, and in other cases with camphire, volatiles, and snake-root.

To make the cataplasm of cumín—

Take of cumín seeds half a pound—bay-berries, the leaves of water germander, and Virginia snake-root, of each three ounces—of cloves, one ounce. Powder the whole ingredients, and make them into a cataplasm, with thrice the weight of honey.

It is in most cases proper to bleed the patient as soon as possible, and to repeat the operation as circumstances may direct; to young, full, and florid habits, this evacuation will be most necessary; especially if the fracture hath been accompanied with any wound, contusion, or bruise.

And those who meet with misfortunes of this kind, should be treated in all respects as those who are afflicted with inflammatory fevers: the diet should be light, low, and cooling; the liquors diluting; and the body should be kept open by giving tamarinds, stewed prunes, roasted apples, or the like, rather than by clysters, which cannot be administered without pain and inconvenience. If, however, the patient's spirits should fail, and he falls too low, he may be indulged with a small quantity

quantity of wine, or such other liquor as he is accustomed to in health, provided his body is not in a feverish state; and, above all things, cleanliness, and such ease as may be procured by supplying him with small pillows and bolsters under those parts of the body which bear most on the bed, in a lying posture, will contribute very considerably to the speedy cure.

Nor is it necessary to keep the patient six or seven weeks on his back, at the expence of his peace of mind and ease of body, in order to effect the cure of a fracture. If care is taken to prevent such galls and excoriations, as occasioning starts in the sleep and perpetual endeavours to change postures when awake, endanger continually the separation of the uniting limb, the patient may be gently and carefully raised in his bed, and remain in a sitting posture some hours every day; but he should be lifted up by others, the practice of fastening cords or ribbands to the bed-posts, and permitting him to assist himself in obtaining a sitting posture, being attended with some danger that the bone may be displaced by the action of the muscles, which are universally affected by such exertions.

In a fracture of a limb, if, after the part has been extended and the bone properly placed, it is secured by splints of pasteboard or stiffened leather, of the length of the fractured limb, and shaped to the part they are intended to support, and these are fixed by the eighteen-tailed bandage already mentioned, and the whole limb is then laid in a proper cradle, of which every surgeon is possessed, or the absolute want of which may be supplied by a flat strong board, with hoops nailed over it, and pillows properly disposed to receive the fractured part; the patient may be taken out of bed as soon as the fracture is supposed to be tolerably united, the machine which contains the limb being carefully moved with him; and this will not only tend to the recovery of his strength generally, but the injured

limb will receive particular benefit, and the cure be compleated much more speedily, than if the patient remained longer wholly in bed.

Fracture of the Leg.

IN the leg there are two bones; the *tibia*, which is the larger bone, and the *fibula*, which is the smallest. The tibia is generally fractured near it's lower extremity, where it is weakest; and often, when this large bone is broken, the smaller suffers the same at it's other extremity. The fibula is also for the most part fractured when there is a dislocation of the inside ancle.

A fracture of the small bone seldom gives any uneasiness, or hinders from walking; however, it may be discovered by taking hold of the leg under the bone with one hand, and with the other moving the foot; for thus the hand which holds the leg will distinguish the fracture. In this case, a tight bandage upon the fractured part is not to be admitted; but if it is applied to the two extremities, the broken ends will be brought into contact, and thus the cure will be effected.

When the great bone is fractured, the patient should be laid on the injured side, on a flat surface, and the knee of the fractured limb is to be gently raised towards the belly, at the same time bending the joint of the knee; by these means the extending muscles of the foot are relaxed, and the extension required to reduce the bone will be performed with ease. Having replaced the fractured bone, a long splint, padded with tow, must be applied to the small bone, and another on the inside of the great bone, and they are to be secured with the eighteen-tailed bandage. The patient may lie on the injured side during the cure, and in this way a cradle or fracture box may be rendered unnecessary; the knee may also continue in the same posture as that in which the fracture was reduced.

A fractured

A fractured Thigh.

IT has been observed, that when either the bone of the upper arm or of the thigh breaks inwardly, a worse train of symptoms follow than when the same happens outwardly, because of the greater number of vessels and nerves lodged in their inner parts.

When the thigh is fractured in it's middle or lower part, it's restitution may be effected by the hand; but when the accident happens on the upper part, a greater force is generally required. Wherever the seat of the fracture is, the position of the patient and of the limb to be reduced, should be ordered as in the case of a fractured leg; then, a due extension being made, and the ends of the fractured bone replaced, splints, properly padded with tow, must be secured; and if a machine of modern invention for fractures of the thigh-bone is made use of, little more than patience will be required in order to the cure; but when this machine is not to be had, the position proposed when the leg is fractured may be trusted to, and this particularly when the neck of the thigh is the seat of the accident.

If a fracture of the thigh is complicated with a wound, it is attended with great danger; happening near the joints, it is usually fatal, the large blood-vessels being in that case too frequently lacerated. The danger is not much less if the wound is in the back part of the thigh, because of the difficulty of dressing it. When the hæmorrhage can be restrained by the tourniquet, and the wounded vessel can be taken up, the fracture may be reduced; but if the bone is much injured, and the hæmorrhage violent, the loss of the limb seems the only expedient to preserve life.

When a fracture happens of the neck of the thigh-bone, it is sometimes mistaken for a dislocation; but this bone is more

easily broken than dislocated: and fractures in it's neck are more common than in it's other parts. A fracture in the neck of this bone is both reduced and retained in it's place with more difficulty than in the body of it, and the re-union is seldom effected without leaving a lameness: and these difficulties are occasioned by the oblique direction of the neck, with the quantity and strength of the muscles.

The signs of this kind of fracture are, according to anatomists, the thigh and knee turning outwards; the limb is much shortened, and considerably shrunk; pain is felt in the course of the great muscle which partly surrounds the thigh; and which, from it's origin and insertion, must frequently be put upon the stretch, often affecting the inside just below the knee, and a crackling is observed when the patient moves his limb: when these symptoms appear, the limb being gently but steadily extended, until that which has received the injury appears as long as the sound one, the patient should be laid in the posture above recommended when the leg is the part thus affected, and secured in like manner; and bleeding and other means should be employed to prevent or to remove inflammation. A machine has also been invented for extending this limb, and keeping the position of it; and when this can be obtained, it is the most eligible method for preventing future inconveniences.

A fractured Upper Arm, between the Shoulder and Elbow.

IF the bone of this part of the arm is fractured in the middle, no great difficulty attends; but if near the head and on the outside, it is sometimes attended both with pain and danger. To reduce this fracture, the patient is to be placed on a chair; his elbow being bent, an assistant

should steadily grasp the fractured bone at it's lower end, and another person do the same a little below the shoulder; then the arm being extended gently, the operator must take up the fractured part in his hand, and as soon as the extension is sufficient, the bone being thereby replaced, splinters and a bandage are to be applied, and the arm hung in a sling.

It sometimes happens, that when the fracture is oblique, the sharp ends of the bone are so entangled in the adjacent muscles as to prevent a re-union; but an incision being made upon them, and the points sawed off, an easy way may be found of replacing them, and a speedy cure effected.

Fracture of the Collar-Bone.

WHATEVER part of the collar-bone is broken, the part which joins the shoulder-blade descends below that which is fixed to the breast-bone, on account of the weight of the arm. When this bone is fractured, the patient cannot lift up his arm, but it hangs inclined towards his breast; and in a slight motion of the upper arm, the fracture in the collar-bone will be evident to the touch, sight, or ear, or all of them. This fracture is easily reduced, but it is attended with considerable difficulty to retain the bones in their proper situation. To reduce the fracture, an assistant should place his knee between the shoulder-blades of the patient, then with his two hands draw the shoulders back, in which way the collar-bone will be extended; the surgeon, or other operator, standing before the patient, must then reduce the ends of the bone to their proper position: this done, a narrow but thick bolster should be applied above and below the collar-bone, to fill up the cavities; upon these, two other narrow bolsters should be laid, in the form of the letter X; and over these

a piece of thick paper, moistened with vinegar; then a wad of tow, or a ball made of soft rags, should be placed under the armpit, next to where the fracture is, to support the shoulder; after this, the bandage must be applied so as to keep the fractured ends from moving, and the arm must be suspended in a sling fixed about the neck.

Fracture of the Arm, between the Elbow and the Wrist.

THIS part of the arm hath two bones: the *radius*, which is the upper and rather the larger; and the *ulna*, which is the lower and smaller. Fractures here are discovered by the sight, touch, and ear; by the touch and sight, by moving the hand of the injured arm inward and outward; though a fracture in the lower bone, from it's inability to support the joint, will shew itself sooner than that of the upper: the ear discovers a grating noise, if the elbow is held steady, and the hand is moved inward and outward.

If the upper bone is to be reduced, and the fragments have receded towards the lower, some person should stretch the arm, and the surgeon should press down the patient's hand until the depressed part is elevated; after this, the arm is to be compressed on each side with the palms of the hands, so as to restore the constricted muscles, and the fragments of the fractured bone, to their natural position; then a compress and strong pasteboard is to be laid upon the forepart of the arm, to prevent the fractured bone from being drawn toward the sound one; after which the circular bandage is to be applied, and the arm hung in a sling, with the hand in a depending situation.

If the other bone is fractured, the process should be the same as when the accident happens to that already described; only remembering to turn the hand towards the

the contrary way, until the depressed part of this bone has recovered it's former position.

When both these bones are broken, the management is to be the same as with either of them singly; but in this case it is necessary to put longitudinal compresses, as near as may be, betwixt the bones, in order to prevent the callus uniting them, which would hinder the circular motion of the arm.

A fractured Knee-Pan.

WHEN only a small fragment of this bone is attracted upwards, if the patient is fat, it is not very easy to learn his case. In searching to discover whether the knee-pan is broken or not, the knee must not be bent, because that motion will separate the fragments farther from each other, and occasion unnecessary pain. This bone is generally broken transversely, the lower part remaining fixed at the knee; but the upper being drawn by the muscles on the forepart of the thigh. When the cure is ascertained, the patient must be laid on his back, his leg extended, and the muscles gently pressed above the fractured part downwards, until the fragments of the bones approach within an inch of each other; in this situation they are to be retained by a compress and bandage. The fractured parts should never be brought close together, for this would occasion a stiff joint.

Sometimes the ligament which secures the knee-pan to the greater leg-bone is broken, and this case is mistaken for a fracture of the knee-pan; however, the mistake is not of much consequence, as the management and method of cure are nearly the same in both cases.

Fractures of the Ribs.

WHEN the ribs are broken, and their ends separate from each other, if they project outward, no considerable damage

ensues; but if they press inward, they produce an uneasy pricking pain, inflammation, cough, fever, abscess, spitting of blood, and other disagreeable complaints; and the cure is generally compleated by applying an exact uniform circular compressive bandage, if neither inflammation nor swelling forbid; but when a bandage cannot be used with safety or propriety, a strong adhesive plaister, spread on leather, may be laid over the part; and the patient should keep his body in as even a posture as possible, avoiding all manner of exertions, and as much as may be, the agitations occasioned by coughing, laughing, or the like. In these cases it is generally proper to bleed, to confine the patient to a low diet, and to prescribe plenty of diluting liquors, as well to prevent inflammation, as to act as an internal fomentation.

Fractures of the Skull.

WHEN, from any external violence, this injury is sustained, it is generally attended with loss or faltering of speech, a total or partial deprivation of sense, a lethargy, convulsions, and other symptoms of the like kind; but as these signs may be the effect of an extravasation of matter on the brain, or of a concussion as well as of a fracture, no certain conclusions can be drawn from them. To discover, therefore, if a fracture has actually taken place, it will be necessary to make an incision upon the part where the injury was received; if, upon making the incision, you find the pericranium, or membrane which immediately invests the bones of the skull, loose, you may certainly conclude there is a fracture. In examining for a fracture, care and judgment is required to distinguish it from a future, or ordinary joining of the bones in this part: however, if, upon scalping, the pericranium is found firmly adhering to any part that resembles a fracture, we may be assured

assured that it is only a future; but if the pericranium easily separates, the case is a fracture. If, when the head is shaved, you can feel the pericranium under your finger to be loose, this points out the case still more clearly.

If a fracture happens on the skull, some surgeons immediately use the trepan, with a view to prevent the fragments of the broken bone from irritating the dura mater, or membrane which covers the brain within the skull; but others of great eminence forbid it's use, except when a part of the skull is depressed, and recommend deferring this operation till the approach of unfavourable symptoms, and when these do not increase or become alarming, not to proceed to incision and perforation; but, after bleeding, to attempt the cure by often repeated application of warm cephalic fomentations. And a modern practitioner, of great reputation hath prescribed the following treatment in concussions of the brain, and hath found it successful in some cases where the skull was actually fractured.

The patient is first directed to bleed, if necessary, and the bowels to be cleared by a common clyster; a scruple, or less, according to age, habit, and constitution, of Dover's sweating powders, is then to be administered in any proper vehicle, the patient being laid between blankets, and the sweat kept up by such doses of antimonial wine, mixed with liquid laudanum, as may be found necessary, which may be ten or fifteen drops every four or six hours, till the violent symptoms abate, and the patient enjoys

such a freedom from complaint as to need no farther aid of the kind. If the violent symptoms are not allayed by the first dose of the powder, it is to be repeated, or if they should return after they have once abated.

A Fracture of the Nose.

THE bones and cartilages of the nose, are frequently broken by falls and other accidents; and to distinguish which is the case, it may be observed, that when the bones are broken, the nose appears flat in the fractured part; but if the cartilage is injured, the nose inclines to one side. If the injury is considerable, there is danger of an ulcer, a polypus, or a rottenness of the bone, and the cure is difficult: in less aggravated cases, it may be attempted by placing the patient's head in a posture declining backwards, and raising the depressed parts of the nose with a quill thrust up the nostrils with one hand, and at the same time replacing them in their proper positions, with the finger and thumb of the other. After this is done, the nostrils may be stuffed with lint, or a tube of silver may be introduced to keep the parts from being again displaced, and the whole may be secured with a plaister: if the nose has received any external wound, it must be healed in the usual way; and if any part of the bone be actually detached or splintered, so as to make it's re-union difficult, it should be taken away.

CHAP.

C H A P. X.

Of Dislocations.

A Dislocation is the removal of any bone received into a cavity of another, from it's proper seat to another situation, by which means voluntary motion is obstructed; and dislocations are divided into simple or compound; the former, when they are attended with no particular circumstances; the latter, when they are accompanied with wounds, fractures, contusions, or other marks of violence.

Dislocations may proceed from external or from internal causes; and those from internal causes are known by the following signs. The limb is so relaxed that it may be easily moved in any direction; there is a cavity about the joint, and a hollowness between the bones, which may be felt with the fingers. The dislocated bone may easily be replaced, but soon slips out again spontaneously, because of the weakness of the ligament and muscles. The dislocated limb is longer than the sound one; no pain, inflammation, or convulsion, attends a dislocation of this kind, which happens generally to the upper part of the thigh or arm-bone, and sometimes in the articulation of the foot with the greater bone of the leg. When a dislocation happens from an external injury, the signs are sometimes uncertain, because a violent contusion or distortion may occasion a swelling of the joint, which, with the pain, will render the evidences of a dislocation doubtful: in such cases, the judgment must be suspended; and, indeed, if it could be positively determined that a dislocation had happened until the inflammation and swelling had in a great degree given way, attempts towards a reduction would be improper; however, the most ready way to discover a dislocation is to observe that when the head of the

bone is removed out of it's place, the other end will be distorted in an opposite direction, for when the higher end is outwards, the lower will be inwards, and so the contrary; and that generally a protuberance is observable where the dislocated part of the bone is seated, and an hollowness in the part from whence it receded; though, where there is much flesh, the swelling and cavity are not so perceivable.

Various symptoms are produced by a dislocation, but these are somewhat different, as the parts differ in which the accident hath happened; in general they are a total or partial incapability of moving the dislocated limb; an extension of some of the adjacent muscles, and a relaxation of others; an insensibility of the adjacent parts; a compression of the adjoining vessels, which may occasion an atrophy, or a mortification, pain, convulsion, abscesses, and the like.

Compound dislocations are more dangerous than compound fractures; and the worst dislocation of all, is that produced by a solution, or a separation of the head from the body of the bone, to which it is joined by an intervening cartilage, which in grown persons is hardly distinguishable from the bone itself; but other difficulties and uncertainties are to be apprehended from the largeness of the dislocation or the distance of the dislocated bone from it's proper place; the figure of the dislocated limb, and the part in which the dislocation is seated; the parts pressed or intercepted; which in different circumstances may occasion pain, inflammation, and other violent symptoms.

The objects to be attended to in the cure are, to reduce the dislocated part, and to

retain it in it's proper situation: but if the inflammation or swelling are considerable, these must be removed, or very considerably abated before the reduction is attempted. In reducing dislocations, the muscles should all be put into a state of the greatest relaxation possible; as the resistance of the muscles is the principal cause of the difficulty of reducing dislocations, much force is never required, provided the muscles are relaxed by a proper position of the limb; and in recent cases at least, the ligaments which covers the head of the bone will rarely, if ever, impede the reduction. The extension should be gradual and continued, until the dislocated bone is on a level with the cavity from whence it has been displaced; at which time, if the head does not return of itself, it must be assisted by pressing upon it, and directing the dislocated bone. Some anatomists seem to think that the construction of the muscles is rarely an impediment to the reduction, but the rupture in the ligament above described; however, a gentle extension is universally recommended, and to avoid every violent effort.

A Dislocation of the Collar-Bone.

WHEN this accident happens, the sooner the reduction is performed the better, for old dislocations of this kind are seldom compleatly cured.

The collar-bone may slip from the breast-bone, either outwardly or inward; in the first case, an unusual swelling is observed about the joining of the bones; in the latter case, a cavity is observed in the part affected; the wind-pipe, the carotid arteries, or those which pass by the throat to the temples, the contiguous nerve, and the gullet are squeezed: as to the reduction of this bone in these cases, the same general methods will suffice which are laid down in case of a fracture of it, when that acci-

dent hath happened near the breast-bone; the like may be also observed with respect to a dislocation happening next to the shoulder-bone.

A dislocation of the collar-bone happening next the shoulder-bone, is sometimes not easily distinguished from a dislocated upper-arm; but in this case the upper part of the collar-bone protuberates upwards, and a hollow or cavity is observed in the part where that bone is separated from the shoulder-bone; violent pains also attend, and the patient cannot move the arm upwards; if in this case the reduction is not speedily effected, the arm will most probably soon be attacked by a palsy.

In securing dislocations of this bone, bandages are to be used with the utmost care, as any neglect in this particular may leave a stiff or still dislocated arm; if the bone is displaced near the breast-bone, and is started outward, besides bolsters to keep down the end of the bone, the capeline bandage, or that with two rollers, should be used; but if inward, the stellate or cross bandage is to be preferred, on account of it's keeping the shoulder back. If the dislocation is next the shoulder-blade, the common bandage or roller with two heads may be used, and if both collar-bones are displaced, the double-headed bandage will be also required.

A Dislocation of the Upper-Bone of the Arm.

THE head of this bone may slip out before, behind, (even under the blade bone) or downward; but never upwards except the top of the shoulder-blade, and that process of it which is called the coracoid, are fractured.

When the upper arm-bone is dislocated downwards, there is a cavity in the upper part of it perceptible to the eye in some instances, but to the finger in all, and a protuberance or swelling in the arm-pit, because

because there the head of the bone is lodged; the dislocated arm is longer than the other, and when it can be moved or extended, it gives exquisite pain in lifting it up to the mouth.

Dislocations of this bone are most easily reduced soon after the accident; those of long standing are restored with difficulty; but if the head of this bone grows to the adjacent parts, a reduction can by no means be effected.

To perform the reduction, the fore-arm is to be bent, and an assistant must support it; then the arm is to be elevated, so that the elbow may be advanced somewhat above the shoulder, bringing it a little inward; a proper extension is now to be made by one assistant, whilst another, counteracting him, draws the lower angle of the shoulder-blade backward toward the spine, and presses the top of the same bone downwards; the operator with his fingers in the arm-pit presses the head of the bone upwards as soon as he perceives the extension to be sufficiently made, and at the same time with his other hand, brings the elbow of the dislocated arm to the patient's side; an extension made downward, or even horizontally, more frequently fails, than when it is made in some degree upward.

Some surgeons use a napkin, which is brought under the patient's arm and tied over the operator's neck; and in this way the reduction of the bone may be facilitated.

When the dislocation is forward, so that the head of the arm-bone is under the great muscle of the breast, which is commonly called the pectoral muscle, there is a cavity under the shoulder-bone; but the head of the dislocated bone projects toward the breast more than when it is just in the arm-pit; and if the arm is moved, a more acute pain is felt than in the preceding case, for the great artery and the nerves of the arm are much pressed; if this kind of dislocation

is not easily reduced by the method directed, when the head of the arm-bone is in the arm-pit, a pulley from the top of a room may be fastened to the dislocated arm, just above the elbow, and the patient gradually raised from the ground by it; this at least brings the head of the arm-bone into the arm-pit, whence, as directed above, it may be restored to its proper place; in this process the fore arm must be brought toward the breast, that the muscles may be relaxed.

If the dislocation is backward, the elbow approaches the breast, and the head of the bone is prominent on the outside of the shoulder, the arm cannot be moved from the breast, nor extended without great agony; and the lower angle of the shoulder-blade will be somewhat pushed out. In this case the general proceedings may be the same as when the head of the arm-bone is under the pectoral muscles.

When a pulley cannot easily be had, a taller strong man may take the patient's arm over his shoulder and gently raise him from the ground, and the operator may push the head of the dislocated bone into its place as the body becomes suspended; and this method of suspending the body is not attended with the pain that might be apprehended, for as no force is used about the shoulder to make a counter extension, the patient does not suffer from such troublesome excoriations and contusions as too commonly attend other methods.

As to the use of machines for reducing a dislocated arm-bone, surgeons of the first eminence are of opinion that they are never actually necessary, as the very best of them are apt to bruise the part, and require great care to keep them perpendicular to the sides of the patients.

As in other dislocations, bleeding and regimen, to prevent or check inflammation and swelling, may be proper after reduction, and the arm must be suspended in a sling.

A Dislocation of the Elbow.

THIS bone is seldom perfectly dislocated, except the pointed extremity of it is fractured, or the ligaments greatly weakened; this dislocation may be backward, (which is the most frequent) forward, outward, or inward; if the dislocation is backward, the arm appears crooked, shorter than the other, and cannot be extended; in the internal part of the bending, the upper-arm-bone will be prominent; in the external the obtuse point of the bone of the fore arm, or that between the elbow and point, with a large cavity between both bones; when by reason of a fracture of the last-mentioned part of the arm-bone, the elbow is pushed forward, the upper arm-bone will stick out behind, the ulna or lower bone of the fore-arm is prominent on the fore-part, and a cavity appears in proportion to the dislocation; if the dislocation is external, the swelling is so too, and the contrary.

When the dislocation has been affected by great violence, or is of long standing, the bone cannot be replaced without great difficulty, on account of the strong ligament, and various processes; recent and slighter dislocations are restored with less difficulty.

If the ligaments and tendons are rigid—emollient applications must be made some time before attempting the reduction; and for this purpose neats-foot oil may be used, or the following liquor, which is commonly called the egg liquor.

To make the egg liquor—

Take the yolk of a new laid egg, beat it with a spoon till it is as thin as water, then by a single spoonful at a time, add six table-spoonfuls of pure water, shake the mixture well that the egg and water may incorporate. The rigid or stiffened part is to be rubbed gently with it three or four times a day; it must be fresh made every twenty-four hours.

The dislocation of the elbow is to be reduced, by making an extension, until the fore-arm can be put into a moveable state; and then the work is easily accomplished, by bearing upon the lower end of the upper arm-bone with one hand, and by taking hold of the wrist and bending the elbow with the other; and if it is on either side, the hand of the patient must be turned inward or outward, at the same instant, as the case requires. After reduction, the arm must be hung in a string.

A Dislocation of the Hand.

THE hand may be dislocated backward, forward, and on each side; but backward and forward most frequently. The hand is said to be dislocated forward when it inclines to the muscles of the fingers within the hands, and backwards; when it inclines towards those without; outwards, when there is a protuberance near the thumb, and a cavity near the little finger; and inwards, when the contrary happens.

From the distortion of the strong ligament there is exquisite pain, and the fingers are fixed so that they can neither be bent nor extended, by reason of the compression of their tendons; hence will follow inflammation, swelling, abscess, mortification, and a rottenness of the spongy bones of the wrist, which are seldom curable without amputation. But in a recent inconsiderable dislocation, a milder practice will compleat the cure; and even this kind of dislocation should be speedily reduced, which must be done by extending the hand and arm in opposite directions, and placing the hollow of the extended hand on a board, or some other flat body, that the protuberance may be depressed; and this method must be pursued whatever part of the hand is dislocated.

A Dis-

A Dislocation of the Thigh-Bone.

WHEN the neck of this bone is fractured, the injury is sometimes mistaken for a dislocation. The head of the thigh-bone may be dislocated downwards, forwards, inwards, outwards, and backwards. This dislocation, like that of the upper arm-bone, is always perfect, and most frequently happens inward and downward, the head of the bone tending towards the groin.

If the dislocation is outwards, the bone generally slips upward at the same time; if it is inwards and downwards, the leg becomes longer, and more bent than the other: the knee and foot turn outwards; and the head of the bone is thrust near the lower part of the groin. Sometimes the compression of a nerve which communicates with the bladder causes a suppression of urine, and the pressure on the crural nerve, or that which passes from the loins to the thigh, a numbness in the leg; a hollow is perceived in the buttock, because of the change of position in the greater process of the thigh-bone, and the rest of the bone. If the reduction is long neglected, the limb withers: and if the patient should not require a crutch, he will at least halt; the knee of the dislocated limb cannot be brought to the other; the greatest pain is felt in the groin, and no grating can be perceived on moving the limb, as happens where the bone is fractured. If the dislocation is backwards, the limb is drawn upwards, and then the cavity appears in the groin, and a swelling or protuberance in that part of the buttock where the head of the bone and greater process are lodged; the limb is shortened, the foot bends inward, the heel will not touch the ground, but the patient seems to stand on his toes, and the dislocated limb is more easily turned in than extended; in this case, some persons stand and walk firmly without

the bone being even reduced, provided they have a high heel to their shoe.

A fracture in the neck of the thigh-bone is distinguished from a dislocation of its head, in that the thigh-bone may be dislocated by a flux of humours, without any external violence, but only by walking or rising up; that it may be unattended with pain, swelling, or inflammation; and that the whole limb may be bent and turned about in the receiving cavity without any crackling noise, which is usually heard in fractures; the contrary signs of course indicate a fracture.

In reducing the dislocated head of the thigh-bone an extension at length will not suffice, but it must be according to the direction of the neck of the bone; and eminent anatomists direct, when the thigh-bone is dislocated inward or outward, to lay the patient on one side, so that the part into which the bone hath slipped be always uppermost, and that from which it hath been displaced lowermost; by which means the extension may be made in any direction which appears necessary, and the particular circumstances will point out various ways of securing the patient upon a bed, (for a table is usually too high) so that a proper resistance may be made to the extension. This done, the knee bent, and a towel fixed properly above it, the operator must place himself on that side of the thigh to which the bone is dislocated, with his knee near the head of the bone, and both hands on the opposite side of the knee of the patient, an assistant being fixed at the ankle. The extension may be then gradually began by three or four men, with the thigh rather in a bending state; and when there is reason to think that the head of the bone is brought to a level with the socket, the extension being steadily continued, the knee may be bent near to the belly; and, at the same time, whilst the knee pushes the bone towards its place, the ankle must be moved

in the same direction, but the knee of the patient in a contrary one. Thus the head will always go into the socket, provided a due extension is made before it is attempted to be returned.

Sometimes the head of the thigh-bone is pushed between the two bones which are called the *ischium* and *sacrum*, below the extremity of the back-bone; in this case, except the patient is very thin, before attempting the reduction, it has been thought advisable to reduce his flesh by repeated brisk purges, given at short intervals; by which means the state of the case may be better discovered, and the reduction effected with more certainty and ease.

A Dislocation of the Knee-Pan.

THE dislocation of this bone may happen externally and internally. In order to it's reduction, the patient's leg must be set straight; or, if he can, he may stand erect: then the operator must take firm hold of the knee-pan with his fingers, and force it into it's place. After this nothing is required but a strengthening plaister and a little rest.

A Dislocation of the smaller Bone of the Leg.

THE small bone may be separated from the greater either at the lower or higher part. When it happens at the lower part, it is in general occasioned by a dislocation of the foot externally; this bone must be reduced, and bound up, and the rest of the treatment must be agreeable to the directions given for dislocations of the knee-pan.

A Dislocation of the Ankle.

IT has been observed by anatomists, that when the ankle is dislocated internally, there is generally a fracture of the smaller

bone of the leg; but if the person is of a loose habit, the ligaments may be relaxed without such a fracture.

When the dislocation of the ankle is inward, the bottom of the foot turns outward; when it is dislocated outwardly, the bottom of the foot turns inward; if forward, the heel becomes shorter, and the foot longer than usual; if backward, the heel seems lengthened, and the foot shortened. This kind of dislocation is usually attended with intense pain, and frequently with other very violent symptoms; and the difficulty of reducing the ankle is proportioned to the violence of the cause. The patient being conveniently placed, two assistants must extend the leg and foot in opposite directions, whilst the operator replaces the bones with his hands and fingers. This work finished, the patient should keep in bed until the symptoms leave him, and he is in some measure able to support the weight of his body upon his ankle.

A Dislocation of the Heel-Bone.

THIS bone may be dislocated both inwardly and outwardly; it is discoverable by a cavity on one side, and a swelling or protuberance on the other; and occasions severe pains. The reduction and cure must be the same as directed when the bones of the hand are dislocated.

A Dislocation of the Bones of the Foot.

WHEN these bones are dislocated the pain is usually very severe, and attended with inflammation, and sometimes convulsions, if speedy assistance is not obtained. They must be reduced as directed when the bones of the hand are the subject of this accident.

A Dislocation

A Dislocation of the Bones of the Nose.

BOTH the eye and the touch sufficiently point out this accident. The reduction is to be effected by a quill put up the nostrils, and then with the fingers replacing the bone or bones as has been directed in case of a fracture in the same parts. After the reduction, a sticking plaister should be applied and continued some time.

A Dislocation of the lower Jaw.

THE lower jaw-bone is usually dislocated forwards; sometimes on one and sometimes on both it's sides. If one side only is dislocated, the chin inclines to the opposite side; and on the dislocated side the mouth is wider open than usual. When both sides are dislocated, the mouth gapes wide, the jaw starts forward, and the chin falls towards the breast; so that the patient can neither shut his mouth, speak distinctly, nor swallow without extreme difficulty. This accident may be occasioned by a blow or by yawning.

When one side only is dislocated, it is easily reduced; but when both sides are the subjects of this injury, reduction is necessary, or violent and sometimes fatal symptoms soon follow.

To reduce the jaw-bone, place the patient in a low seat, with his head secured against the breast of an assistant, then the operator having wrapped his thumbs round with cloths, to prevent their being bit, must place them on the patient's teeth, as far back as he conveniently can, at the same time fixing his fingers on the outside of the jaw; when secure hold is thus taken of the jaw, it must be pressed downward, then backward and then upward. If all

this is done as nearly as possible in the same instant, the reduction will be compleat.

If only one side is dislocated, the same proceedings will be necessary, only that the injured side must be most forcibly pressed downwards, and backwards.

In this case bandages can be of no use.

A Dislocation of the Neck.

A Dislocation between the head and the upper part of the neck is immediate death, because of the pressure on the spinal marrow. When a man is said to have broken his neck, the expression means a partial dislocation of the first or second vertebra or joining of the neck-bones only: in this case the chin is fixed to the breast, which prevents the patient from speaking, swallowing, or moving the parts below. Whoever is by when such an accident happens, should immediately turn the patient on his back, and setting his feet against his shoulders, (being himself seated on the ground) he should place his hands below the patient's ears, and pull, gradually increasing the force with which he pulls, and moving the head from side to side at the same time.

When by these means the bones have been reduced to their natural position, the parts should be bathed with camphorated spirit of wine, which may prevent abscesses and other ill consequences.

A Dislocation of the Ribs.

A Rib may be dislocated upwards, downwards, and inwards. If a rib is forced inwards, the pleura or membrane which lines the breast will be injured, and excruciating pains, inflammations, difficulty of breathing,

breathing, coughs, ulcers, immobility of the body, and other violent symptoms, will follow; from whence, as well as from the external position of the side, this misfortune may be discovered: the shortness of breathing is almost an infallible sign. This dislocation happens betwixt the rib and the spine of the back.

When the rib is dislocated upwards or downwards, the patient must be laid on a table, or the arm on the affected side may be fixed over a door, or a round of a ladder, and then the rib may be replaced with the fingers.

Internal dislocations are reduced with difficulty, because neither the hands nor any instrument can be applied to elevate them; however, the patient may be laid on his belly over some body of a cylindrical form; and the inner part of the rib being moved gently towards the back, or a little shaken, the head may probably recover it's situation without farther assistance. If this fails, the same methods must be taken as have been directed for fractures of the ribs, when they are forced inwards; but if the symptoms are not violent, nor the heads of the ribs much removed, it will be prudent to abstain from compulsive or violent means, as dislocated ribs have often remained so without danger, or much inconvenience.

The bandage should be a napkin and scapulary; and bolsters of folded linen may be applied after squeezing them out of camphorated spirit of wine.

The scapulary and napkin is a piece of cloth, four or five inches broad, in the middle of which a slit is made for the head to pass through; the length must be proportioned to the stature of the patient; but it must reach below the displaced rib, and rollers are fixed to the corners of it, by which it is effectually secured.

A Dislocation of the Vertebrae, or Separation of the Parts of the Back or Neck-Bones.

DISLOCATIONS of these bones are rarely perfect. Those of the neck being small and easily moveable, are more subject to this accident than those of the back. Those of the loins are also more easily dislocated than those of the back, because they are more moveable and smooth, and destitute of those cavities with which the vertebrae of the back are furnished, and have a thicker cartilage interposed between each. Dislocations of the vertebrae must be imperfect, unless attended with a fracture and a laceration of the spinal marrow, which threatens instant death. But even these imperfect dislocations are often speedily fatal; and they most frequently happen in the upper vertebrae of the neck, for the reasons already mentioned.

It has been observed, that children, between the ages of four and ten, are apt to have dislocations of the vertebrae of the neck near the head, from internal causes; and instances of this kind sometimes happen which are manifestly occasioned by worms; because, when those animals have been either destroyed or voided, the patients necks have spontaneously and suddenly returned to their original state, and every other symptom presently vanished.

The bones of the back are seldom moved much without a fracture; their upper or lower projections, and sometimes only one of them being usually misplaced; and this partial dislocation does not happen without great violence. When a vertebrae or division of the back-bone is dislocated without a fracture, the body leans to one side or forwards; if the left side is affected, the patient leans to the right, and so the contrary.

Dislocations of the back-bone are discovered by the crookedness or inequality of the

the part; by the patient's incapability of standing or walking, and by his whole body seeming paralytic; all the parts below the dislocation are also insensible and immovable; the excrements and the urine are either wholly withheld, or involuntarily emitted; the lower parts gradually mortify, and the death of the unhappy sufferer soon ends the complaint.

Dislocations of all kinds in the spine are attended with considerable danger, both on account of the injury which may be done to the spinal marrow, and the difficulty of reducing the bones. The danger is also augmented as the dislocation approaches to the head, because here the spinal marrow is soonest hurt. When several vertebræ are dislocated together, the symptoms are not in general so violent.

The manner of reducing the dislocated vertebræ of the neck hath already been directed under that head; when both the projections of the vertebræ are dislocated,

the patient must be laid on his belly, over a tub, a cask, or some other round body; two assistants must then depress both ends of the dislocated spine, on each side, which will elevate and gradually extend the vertebræ; the spinal bone of the back being thus bent in form of an arch, the operator is to press down the lower dislocated and prominent vertebræ, and at the same instant must expeditiously push the superior part of the body upwards. If the first attempt fails, it must be repeated two or three times. When the left projection only is displaced, after the patient is laid in the same posture as before described, one assistant may depress the left thigh-bone, and the other the right arm-bone at the shoulder, and the reverse, if the injury is on the other side. After the reduction hath been effected, it will be proper to take away some blood, and to apply compresses wrung out of spirit of wine camphorated, and the napkin and scapulary, as above described.

C H A P. XI.

Of Strains.

A Strain is the stretch of a tendinous or membranous part beyond its proper limits; and this accident most commonly happens about the joints, being attended with weakness, pain, swelling, and frequently a total incapacity of moving.

It is a received, but very mistaken opinion, that strains are more difficult of cure, and attended with worse consequences, than fractures or dislocations; the latter are very frequently followed by abscesses and mortifications, and often leave the limb stiff or distorted; but strains are in general relieved by rest and simple applications, and few

instances have been known of their having produced any other disagreeable effects than confinement and temporary pain.

It is a common practice to immerse the strained limb in a vessel of cold water; and provided it be done immediately, and not persisted in too long, or repeated, it may be of use in slight cases; but if the strain be deep, this cold bathing is wholly ineffectual; and where any degree of inflammation attends, it is actually injurious.

The best and most ready application in those cases is warm vinegar; with this the part affected should be bathed three or four

times a day; and as the tension and violence of the symptoms abate, the vinegar may be used cold, and a small quantity of spirits added to it, the proportion of which latter may be increased as the pain and swelling go off; and when this happens, a bandage should be applied as a support till the return of the natural strength in the part. Some advise the vinegar and spirit of wine to be used alternately, the vinegar being first rubbed in, and at the distance of two or three hours the spirit.

Various other external applications are prescribed on these occasions; among them, the common volatile liniment or opodeldoc, volatile aromatic spirit, diluted with two thirds water to one of the spirit, and cataplasms of oatmeal, with vinegar or stale beer, may be used in some cases with advantage; though we are inclined to believe that the method of treatment advised

above is the most likely to produce speedy and salutary effects

Strains in the spine or back-bone frequently bring on abscesses and inflammation, which destroying the substance that connects the vertebræ, occasion these bones to start outward; and these accidents sometimes terminate fatally, and are always troublesome and tedious; in the former case, the patient is seized with a palsy in his lower limbs, which gradually increases till it reaches the vital parts; when this does not happen, he is attacked by a severe pain in his back, which admits of no remission but whilst he is in a stooping posture; and in this case a tumor is generally formed; to abate which, and procure relief, the patient must be kept in bed, or supported in a chair, the back of which may be either heightened or lowered at pleasure.

C H A P. XII.

Of the lesser Inconveniences which do not so much affect the Healths of Mankind, as their Ease.

THESSE disagreeable and troublesome, though not dangerous complaints, may be generally confined to *wens*, *warts*, *galls*, *corns*, and *nails* of ill growth, or which have been affected by accidents.

Wens are said to be of three sorts; the first, whose contents resemble boiled rice, curds, or a poultice of bread; the second, the contents of which are of the consistence of honey; and a third, which actually contains a fat matter appearing to possess all the qualities of common grease.

No external remedies will produce any change in these excrescences, which are most effectually got rid of by actual extir-

pation with the knife; and this attempt may be made with safety, or not, in the two former cases, as they are situated with respect to adjacent vessels, wounding which might endanger the patient's life. In the latter case, as the wen does not run between the muscles, nor possesses any blood-vessels of considerable size, it may always be cut off with ease and safety.

When the bases of wens of either of the above species are narrow, and they expand and grow larger towards the surfaces, attempts are sometimes made to take them off by ligatures of silk wound round the lower parts of them, and drawn tight from time to

to time, till the excrescences either actually drop off, or are held by such a small neck or stem, that they may be cut through without danger of a hæmorrhage; but this process is attended with difficulty, and may in some cases occasion inflammatory symptoms, and even mortification; so that we cannot advise this expedient, when assistance can be had to remove them by incision.

Warts are said by ingenious writers to be sometimes the effects of a particular disposition or fault in the blood, which throws out and feeds a surprizing quantity of these troublesome excrescences; but this chiefly happens to children between four and ten years of age, and of those to such in particular as feed principally on milk and milk meats; which may account for a common observation, that the children of peasants are more liable to warts than those of any higher class.

When they are occasioned by internal causes, it will be necessary to change the diet, and two or three pills of the following composition may be taken every other night—

Take of Spanish soap, six drams; of extract of dandelion, one dram and a half; of gum ammoniac, half a dram—make the whole into a mass with syrup of maidenhair, or any other mild syrup, and divide it into pills of three grains each.

But warts are more commonly an accidental disorder of the skin, and require to be removed by external means.

For this purpose, whenever they become troublesome, ligatures may be made round the bottoms of them with silk or thread waxed, which will seldom fail to take them off in time; though, as they approach nearer to separation, they are apt to occasion pain and inconvenience, which may be avoided by cutting them off with sharp scissars, or a crooked knife, and immediately applying a sticking plaister of diachy-

lon, with the gums, over the part, which in general facilitates a suppuration, and effectually destroys the little arteries which seem to be the roots of these excrescences.

Warts may also be removed by corroding applications; such as the milk of spurge, swallow-wort, fig-leaves; celandine, or the gail of the eel or pike; but these corrosives should be made use of with great caution, and especially by persons who have thin and delicate skins, as they are apt to occasion swelling and inflammation: and still more care should be taken in the application of the mineral acids, the lunar caustic, or an actual cautery or burning with a hot iron; all which are prescribed as effectual means to eradicate these unpleasant and unsightly protuberances. Perhaps a plaister of common salt dissolved with vinegar, or of sal ammoniac and gum galbanum well incorporated, may as effectually answer the intended purpose, without producing these inconveniences, which are likely to happen from more powerful applications.

And, indeed, when these excrescences are seated on the knuckles, the use of the knife or caustic applications may endanger the tendons; so that unless the milder remedies will prevail, it is most advisable to let them remain, especially as they frequently disappear spontaneously, or fall off in consequence of accidental blows and bruises.

And this also should be the case with those livid or bluish warts which sometimes shew themselves on the eye-lids, lips, and other parts of the face; these being of a cancerous nature, are apt to degenerate into that disease, if they are disturbed or irritated by any attempt to remove them.

Galls may be of two kinds; either such as occasion simple excoriations of the skin, or such as produce bladders containing a thin and acrid matter.

The former, which are generally produced by friction in riding, or by chafing of fat or fleshy persons in walking, may be relieved

relieved by a plaister of Turner's cerate, or a little fullers earth dissolved in warm water; and those whose skins are subject to excoriations in walking, may in general prevent this inconvenience by washing the parts every morning with cold water, and repeating it just before they are about to use any considerable exercise.

When the skin hardens, and, from a smarting or shooting pain, it is certain that matter has formed beneath it, the part should be bathed in warm water, and being then opened, and the contents discharged, a dressing of cerate will in general compleat the cure; but as it heals, the dead skin should be cut away.

Corns are a species of galls occasioned entirely by imprudent conduct in confining the feet in narrow or short shoes, or by misfortune in being obliged to wear such as are hard, stiff, and pieced.

For the cure of this complaint, there are almost as many prescriptions as patients; the best, however, seems to be, to soften the part by repeated immersions in warm water and bran, and then carefully cutting them with a knife that has a short and strong blade, avoiding with extreme caution to wound the sound parts, which will be more likely to be touched in proportion as the corn extends over the surface. After the cutting, the part may be dressed with a diachylon plaister, or one spread with gum ammoniac softened in vinegar. Instead of these plaisters, leaves of house-leek or ground-ivy may be applied to the part after cutting; but it is by no means safe to attempt extirpating the roots by caustics or corrosives; for if the tendon should be affected by these violent applications, inflammation and mortification may be the consequences.

When by any accident the hands, feet, or legs are pierced by *splinters*, *thorns*, or any other *sharp-pointed instruments*, it is of importance that they should be immediately and compleatly extracted; in which case, these punctures are seldom attended with

any serious consequences, which may also be in a great measure prevented by bathing the part after extraction in warm water, or fomenting it with cloths dipped in the same liquid.

But if the offending substance is buried so deep that it cannot be easily got at, or if it is neglected to be sought after, or partially extracted, it may frequently occasion an inflammation, which in the extremities terminates in a tumor, attended with the same symptoms as mark a whitlow; or if it happens in the leg, may produce an abscess, with a train of disagreeable and alarming circumstances.

To avoid such effects, if the substance which has penetrated remains still so near the surface as to be perceptible to the eye or touch, a small incision in the skin may be made, through which it may easily be extracted.

But this would be useless, and probably dangerous, if any inflammation has commenced, or the substance lies deep and out of sight; in either of these cases, the part should be either bathed in warm water, or held a considerable time in the steam of a vessel filled with it; after which emollient poultices of bread, milk, and oil, should be applied, to relax the skin, and render it so supple that the elastic motion of the muscles may be enabled to thrust the offensive body through it; and this should be favoured by a posture as much as possible directing the penetrating substance outward, and keeping the part affected as free from motion as the situation of it will admit.

If the substance which has done the injury cannot be extracted, but an abscess takes place, it should be opened as soon as it can be known with certainty that matter is formed; by this means the foreign body may be speedily removed, and disagreeable effects prevented.

Nothing can be more absurd, than the idea that external applications of particular natures will attract the obtruded substance

substance by some sympathetic or magnetic virtue, no such principle can exist in the skin of a snake, or other matters usually directed for this purpose: if bound closely on the part, they are much more likely to drive the occasion of the complaint deeper, than to facilitate the discharge of it.

It sometimes happens that the splinter or thorn having penetrated with great pain through the exterior integuments enters immediately into the fat, and the pain ceasing, the patient is apt to conclude that no foreign matter had ever been admitted into the skin, or that it had escaped again by the same way in which it entered; yet, at the end of some days, or perhaps weeks, an uneasiness is felt in the part, which is succeeded by acute pains, and these by an inflammation and abscess, which must be treated as before directed for the more recent but similar consequences of these punctures, though it proves in general much more troublesome, tedious, and difficult of cure.

The *nails* on the feet are sometimes so troublesome as to become the objects of attention, and in some instances to occasion pain and actual danger to these extremities; but these inconveniences are in general occasioned rather by accident or neglect than by any defect in the forms of these guards of the ultimate parts of the human body.

The complaints of the nails are brought on by precisely the same causes as produce the other impediments to the comforts of walking; namely, strait, stiff, and uneasy shoes: but to these may be added neglect in paring these excrescences, which being

suffered to grow long, are then turned back by the shoe and driven into the toes, where they bring on pain, inflammation, and astonishing tenderness.

When this happens, the foot should be bathed in warm water till the nails are perfectly soft, and then the corners which penetrate the flesh must be cut off with a knife, and the middle part of the nail, (unless that has also been turned back and has entered the flesh) with a pair of scissors; but if the whole nail has been inverted, all parts of it that require removal must be taken off with the knife, in using which great care should be taken not to draw blood, and especially if the part is in an inflamed state. Mortifications have frequently followed want of proper attention in this particular.

When the offending part of the nail has been displaced, the part may be wrapped in a plaister of cerate for a day or two; and if the inflammation should continue, it may be bathed with flannels wrung out of an emollient fomentation, and sprinkled with camphorated spirits of wine.

The practice of scraping or filing the nails, to render them thin and pliable, is extremely injurious; for as the nails are composed of several sheets of longitudinal fibres, glued together, which being of different lengths, but the same thickness, are so laid over each other as to end at the extremity of the nail, this operation must wound unequally these fibres, and by degrees obstruct their regular renewal, and consequently hurt the growth of the nail and lessen it's transparency.

B O O K XII.

General Cautions which respect Health.

C H A P. I.

A Short Retrospect of the preceding Work, and a State of what remains to be treated of.

THOUGH we have already enumerated almost all the diseases to which the human body is liable, in climates with which we are intimately acquainted, and have specified most of the accidents to which that complicated machine is subject, endeavouring as we have proceeded to point out the several preventive as well as restorative remedies which present themselves, and their applications in the various cases, as well as in different climates, ages, habits, and constitutions, so that we trust no difficulty will remain either in discovering the nature of indispositions from the symptoms, which we have marked with as much accuracy as the different ways in which disorders affect different patients will admit; yet something remains to be said on the subject of those common evacuations to which almost all ranks, and especially the lower, submit on every occasion of illness, without the smallest knowledge of the propriety of such measures, and without the least consideration on the fatal consequences which may attend the improper and injudicious use of them.

Bleeding, purging, and vomiting, are the grand medical resources of the ignorant valetudinarian; and these evacuations are practised by way of prevention or cure not only much more frequently than they are necessary, but too often when the life or future health of the patient may be most materially injured by them.

It is not an easy matter to convince those who are fond of medicine or medical operations, that the same methods taken by a person in perfect health, and by one labouring under any disease or feeling the symptoms of it's approach, are very different matters; that in the former case, if they do not directly occasion sickness, they at best leave the body in a state of propensity to receive the impressions of disease, though in the latter, seasonably applied, they may in many instances prevent the attacks of it; many people have contracted a habit and disposition to take physic, and have injured their healths and impaired their constitutions, however naturally good, by an abuse of those means which Providence has afforded for the recovery and re-establishment of them.

Another strong reason may be offered against perpetual dabbling in physic. When medicines are accustomed to be taken in health, the constitution becomes used to them, and they lose their efficacy when sickness makes them absolutely needful, and the patient is deprived of the assistance they would have given him, if taken only in those times and under those circumstances, in which they were actually necessary.

We shall therefore, in the following chapters, endeavour to point out such rules as may determine when these several evacuations may be attended with advantage, and
in

in what circumstances they are more likely to prove injurious; and we shall adapt our directions on these subjects to the plainest understandings, that those who are most likely to err in these particulars may receive the full benefit of them.

But there is still another matter of great importance to the sick, and which yet remains to be mentioned, and this is to establish a proper understanding between the patient and his physician, when he can procure the assistance of one. We are well aware that many unfortunate events have

been occasioned by the inability of the sick man to describe his complaints accurately to him who is to prescribe for them, nor do the proper questions always occur to the medical practitioner; for the sake of both, therefore, we shall adapt the method of an ingenious and benevolent physician of another country, and state as nearly as may be, the questions necessary to be asked by the physician, so as to obtain from his patient such an idea of his case, as may enable him to prescribe for it with safety and success.

C H A P. II.

Of the Cases in which Bleeding may be useful and prejudicial.

THERE are only four conditions or states of the body, in which bleeding is necessary. The first, when there is too great a quantity of blood in the body; the second, when there is an inflammation or inflammatory disease; the third, when the constitution is threatened with inflammation or other dangerous symptoms, if the vessels are not relaxed by bleeding, (and upon this principle, persons are bled who have received wounds or bruises, pregnant women who are afflicted with coughs; and this operation is performed by way of precaution in other cases:) and the fourth, to assuage excessive pain, though not owing to excess of blood or inflammation, but merely to procure present relief, and afford time for applying other remedies to the cause; but both the two latter reasons are in fact involved in the two former, so that an excess of blood, and an inflamed state of it, are in truth the only absolutely necessary motives for bleeding.

Of inflammatory diseases, and all the

symptoms pointing them out and attending them, we have already spoken largely; the excess of blood may be discovered by the following signs and circumstances.

The first leading circumstance to be remarked, is the patient's manner of living when in health; if he eats freely of flesh, and other juicy and nutritious food; if he drinks rich wine, ale, and other strong or nourishing liquors; if he digests his food well, uses little exercise, indulges in much sleep, and is subject to no very extraordinary evacuation, it may be very fairly inferred that he abounds in blood.

But excess of blood from these causes is seldom found among the lower class of people, and particularly peasants, who are most addicted to bleeding; the food they eat generates but a small quantity of blood, and the constant exercise to which they are enured, conspires to render it less; so that one of the principal causes of this evacuation, seldom exists among the low and laborious ranks of life.

The

The many other causes which we are about to enumerate, are not so strictly confined to any particular class; though even some of these are much less frequently met with among the inferior than among the higher orders of men. These are, a decrease, stoppage, or interruption of some accustomed involuntary hæmorrhage, or discharge of blood; a full and strong pulse, and veins visibly filled with blood, in a body neither lean, thin, or overheated; a florid and lively colour in the face; great and unusual numbness in the limbs; more profound sleep, and of longer continuance than usual, yet somewhat disturbed by dreams and restlessness; a greater fatigue than ordinary after usual exercise or labour, and even a perceptible weight and oppression after a common walk; palpitations, accompanied sometimes with very great dejection, and at others with fainting fits, and especially on being in any hot place, or any considerable motion; giddiness, or swimings of the head, especially after stooping, and immediately on being waked from sleep; pains in the head, to which the patient has not been usually subject, and which do not seem to arise from indigestion; unusual heat over the whole body; an itching in the skin, and particularly after exercise, at approaching a fire, or any other additional warmth communicated to the body, and hæmorrhages from the nose or otherwise; always, however, giving present relief, and raising the spirits.

Yet one of these symptoms is seldom sufficient to prove such an excess of blood as to constitute ill health; several of them must be found to concur, and the causes of that concurrence be undoubted, before such a conclusion should be formed.

When, however, from all circumstances, it is apparent that such an excess exists, a single, or even a repeated bleeding, may be attended with beneficial consequences; nor

is it in general at all material from what part of the body the blood is drawn.

But when none of the above-mentioned circumstances are apparent, bleeding is by no means necessary; nor should this operation ever take place but in very particular cases, and under the opinion of an experienced physician; when the situation and condition of the body answers any part of the following description.

When the patient is an infant, or very far advanced in life; when his constitution is naturally weak and feeble, or he is reduced by sickness, or other bodily infirmities; when the pulse is low, small, weak, or intermittent, and the countenance pale or cadaverous; when the appetite is decayed, the flesh wastes for want of nourishment, and the patient is subject to nocturnal sweats, or profuse perspiration after any considerable exercise; when the state of the stomach is disordered, and digestion is so ill performed that a proper quantity of blood cannot be generated; when the body has been debilitated by a dysentery of any kind, hæmorrhage, sweat, or profuse discharge of urine, either as original diseases, or as the crisis of some other; when some chronic disorder of long standing, arising from obstruction, hath rendered it probable that but little blood can have been formed; when the constitution seems exhausted, and the habit bad; and when the blood is in a broken or dissolved state, thin, pale, and inclined to putridity.

In all these cases, and perhaps in some others, a single bleeding will generally prove hurtful; and a repetition of the operation may prove immediately fatal, or bring on a train of dangerous and incurable symptoms.

For whatever may be the patient's situation, or however high his health, or robust his constitution, certain it is, that the bleeding which is unnecessary is injurious; and that a repetition of this operation tends to lessen

lessen the powers of circulation, substitute fat for flesh, bring on a general weakness, and incapability of enduring fatigue, hasten the approach of all the imbecilities of old age, and the digestion suffering, of course a dropsy is too often one of the effects.

Nor are these the only fatal consequences which follow the wanton and injudicious practice of bleeding; as the perspiration must necessarily be injured by it, the patient becomes proportionably more subject to all the inconveniences of colds, and consequent disorders; the nervous system partakes of the general weakness; and lowness of spirits, tremblings, and all the hypochondriac symptoms, fill up the measure of evils.

The arguments which are sometimes used in favour of bleeding are self-destructive: if it should be asserted, that the loss of blood is speedily repaired, and that those who suffer it have been found to weigh more in a few days after the operation than they did before, inferring from thence that this loss is easily and speedily repaired; it may be answered, that the increase of weight, instead of affording an argument in support of bleeding, operates strongly against it; amounting to an undoubted proof, that the body is reduced to such a state as to be incapable of rendering the natural excretions or evacuations compleat; that therefore some noxious humours which required expulsion, remain, and render the mass of blood, though somewhat increased in quantity, less pure, and less proper to support the body in health, than before it has received this addition: nay, if it should be admitted that the augmentation of the blood was made in a fluid equal in purity and goodness to that which had been taken away, it may fairly be argued that repeated bleedings would tend to produce such an excess of blood, as must infallibly bring on inflammatory disorders.

But bleeding may in many, if not most instances, be rendered unnecessary, by avoiding the causes which tend to augment the quantity of blood; and this may be done by altering the nature, and lessening the quantity, of nutritious food and liquors; taking a larger proportion of vegetable than of animal food, increasing the accustomed exercise, and abridging the usual hours of sleep; by these means, the quantity of the blood will be gradually and insensibly decreased, and that too in such a way as not to commit any violence on the constitution; the remaining blood will be more pure, and even less charged with noxious humours, than before. And on any occasion in which bleeding may be actually requisite, the best effects might be expected from it; and such a course we recommend to those who have habituated themselves to bleed at certain periodical seasons, as the only method of getting rid of a custom which cannot be pursued without certain and imminent danger to their constitutions and lives.

Before we conclude this chapter, it may be right to mention a vulgar error, which, however, is too prevalent, that the first bleeding infallibly preserves the patient's life, however desperate the disease, or extreme the danger; but this is a most pernicious doctrine, and cannot be too strongly opposed, because on this dependance the disorder which an early bleeding might have suppressed, will be suffered to rise to such a height, that at the critical moment when it may be thought proper to exert this charm in favour of the deluded patient, the fatal invader of his health may, and most probably will, have got too sure possession of his posts to be expelled by this attack, and the unfortunate patient fall a sacrifice to folly, ignorance, and absurdity.

CHAP. III.

Of Purging and Vomiting.

OF these two methods of emptying the stomach and bowels, when they are either of them overloaded, the former is unquestionably much more natural, and therefore is in most cases to be preferred; yet there are undoubtedly some in which artificial vomiting is required, though it occasions violent motions, and such as are contradictory to the course of nature.

The following are the signs which point out a necessity for *purging*. A salt, bitter, or other disagreeable taste in the mouth, especially in the morning; a foul tongue, lips, and teeth; sour and foetid eructations or belchings; wind and swelling in the stomach; loss of appetite, increasing by degrees, yet unaccompanied by any fever, and terminating in a total dislike at first of some kinds of food, and at length of all, and a sameness of taste in all the aliment which is attempted to be got down; frequent retchings to vomit, and particularly in the mornings fasting, not being occasioned by pregnancy, or other particular disorder which requires different treatment; a discharge by spontaneous vomit of bitter stinking matter; a sense of weight in the stomach and bowels, and a weariness in the loins and knees; loss of strength, with restlessness, peevishness, and depression of spirits; pains in the stomach and head; giddiness, and a disposition to sleep immoderately, and at unusual times, particularly after eating; inequality of stools, sometimes too frequent and liquid, and at others too seldom and hard; and an irregular, weakened and intermitting pulse.

For most of these complaints, when the patient does not labour under any particular disease of which they may be accounted symptoms, gentle purges, adapted to the

nature of the indisposition, as prescribed in various parts of this work, may be administered with propriety; the quantities, and necessity of repeating which, must also be governed by age, constitution, and the particular circumstances and exigencies of the case.

But as ill tastes in the mouth, belchings, frequent retchings to vomit, and actual discharges in that way, are proofs that the cause of the indisposition is a disordered state of the stomach, *vomits* will be of service, several kinds of which have been already prescribed in different disorders, though we should recommend those of ipecacuanha in the cases just mentioned.

But both these evacuations are to be avoided, when the patient's indisposition originates principally in a general weakness, or an exhausted habit; when it is attended with fever in any degree of violence, with a considerable augmentation of the natural heat of the body, with any particular dryness or crispness of the skin, and particularly in the extremities; when the exertions of nature favour some other evacuation, such as sweats, the periodical discharges of females, or the like; during the violent paroxysms of gout, or other disorders which depend on perspiration for relief; in scrophulous cases, and such other inveterate obstructions as purges have been found incapable of removing; and in many of the complaints which arise from a disordered or weakened nervous system.

There are also some other cases besides those already mentioned, in which it may be proper to give a purge, yet vomiting would be attended with the utmost danger; and those are, when the excess of blood has increased the force of the circulation, and the

the blood-vessels of the upper parts of the body being unusually distended, might burst from the violent efforts used in vomiting, and the patient expire on the spot; instances of which have not unfrequently happened. The same reasons will also operate against vomiting those who are subject to bleedings from the nose, or other hæmorrhages; women with child, or persons troubled with ruptures: yet in all these cases it may be necessary to purge.

Acrid, sharp purges, and violent vomits, are apt to produce the same effects as certain poisons, the patient experiencing the same kinds of pains and agitations, and in certain cases swoonings, and even convulsions; and sometimes violent purges cause such continued and immoderate evacuations, as to bring the patient's life into extreme danger.

In the former case, the patient must be treated as if he was actually poisoned; he must be filled with oleous and emollient liquids; clysters of the same composition, with the addition of yolks of eggs, should be frequently thrown up; and if the pains are acute, the pulse high, and the heat and fever troublesome, it may be also necessary to bleed moderately, according as the strength of the patient and other circumstances may direct.

When the discharges continue so long and so excessive as to threaten danger, the patient should drink freely of diluting liquors; after which the evacuation may be stopped by such anodyne medicines as have been prescribed for the relief of acute pains.

The frequent repetitions of unnecessary purges have in general nearly the same effect as bleeding without sufficient cause; or too often, the digestion is injured by them; the functions of the stomach are performed with languor and irregularity; the action of the intestines is suspended; colic pains become frequent and severe; the perspiration is obstructed; defluxions and ner-

vous diseases follow, with universal debility, a falling off of the flesh, a deprivation of spirits, and all the marks of universal decay.

And whilst we are treating of this subject, we must not neglect to mention the pernicious and often fatal effects of frequent purges administered to children: a practice too common in all ranks of life; which, instead of removing or preventing disorders in such young subjects, serve only to weaken their constitutions, stop their growth, and prevent the attainment of that strength which they would otherwise have derived from nature; added to which, they are fatal enemies to the teeth, render those of the female sex liable to future obstructions, and at that time of life when the periodical discharges commence, interrupt them, and occasion irregularity, and other ill consequences.

Another fatal error, too frequently committed, is, the custom of infusing purging medicines in brandy and other spirits, by way of warming and correcting the stomach, to the complaints in which these draughts may possibly afford some temporary relief, but in the event weaken the tones and destroy the functions of that organ, operating ultimately like other drams, in depriving those who accustom themselves to this kind of physic, of digestion and appetite, sinking them into a state of languor and depression of spirits, and bringing on a dropsy to conclude the mischief.

Most people, and those who are young in particular, may in many cases avoid the necessity of purging, in the same manner as they may render the operation of bleeding useless, by lessening their usual quantities of nutritious food and strong liquor; if necessary, omitting one meal in a day; and taking constant additional exercise: in the same way may those who are in the habit of taking purges or vomits periodically break through the abominable custom.

Some

Some general rules may also be observed in the use of both the evacuations of which we now speak.

Preparatory to a purge or vomit, it may not be improper to prepare the patient, by directing him to abstain from any considerable quantity of food, and particularly of the animal kind, for twenty-four hours previous to the intended operation; and to drink in the mean time frequent draughts of herb teas, or other diluting liquors.

Purges may in many cases be as well worked off with decoctions of emollient herbs, sweetened with honey or sugar, as with broths or gruel; and after taking an emetic medicine, no liquid should be given till it excites sickness or retching, and then it should be worked off with moderate draughts only, of camomile-flower, or green tea, the custom of washing out the stomach with large quantities of warm liquors, having been found by experience to

be pernicious, and rather to prevent than promote the discharge of any offending matter from the stomach.

Nor is the preparation for these evacuations, or the management of the patient, during the operation of them, the only caution requisite to prevent ill consequences from the use of them, and to render them beneficial; as the stomach is more or less affected by every vomit or purge, the patient must extend his care to the succeeding three or four days, and not only avoid every species of excess, but observe a strict, temperate, and somewhat abstemious regimen, both with respect to his food and liquors: and, indeed, it will be in vain to expect the most properly administered medicines to be productive of the effects for which they are intended, unless a due regard to these essential points co-operate with them to render the work compleat.

CHAP. IV.

Of the Information necessary to be given by the Patient, and received by the Physician, in order to his prescribing with Safety and Success.

THE extreme difficulties of procuring proper intelligence from patients of the lower orders, on account of their ignorance and want of expression, and a certain shyness or delicacy, which frequently restrains those of a superior class from being explicit and minute in the descriptions of their indispositions, are frequently insuperable obstacles in the road of the physician to prescription and cure; and the perplexity and uneasiness which such difficulties occasion in the mind of a benevolent man, anxious for the safety of his patient, as well as the credit of his own reputation, may sometimes put him off his guard, and pre-

vent such questions from occurring to him as may lead to the discovery he is so solicitous to make.

For the sake of the physician, therefore, as well as the patient, we shall offer a set of general enquiries, which though they cannot possibly be pointed to all the cases which may occur, will yet in a great measure answer the intended purposes, by drawing from the sick such accounts as will not fail to ascertain the nature of their indispositions.

We shall divide these enquiries into three heads; those which are to be made of men, of women, and of children; the complaints
of

of the two latter differing in some particular circumstances from those of the former, as they are both liable to certain indispositions from which the former are exempt.

Questions to sick Men.

OF what age are you?

Are you in general healthy; or are you subject to any particular disorders; and what are they?

What is your accustomed manner of living in health, with respect to temperance and regimen?

How long since did this complaint attack you?

Are you feverish?

Let me feel your pulse; is it hard or soft, quick or slow, regular or intermitting?

Do you retain your strength, or has your present illness weakened you?

Do you keep your bed constantly, or sit up in the day, and how long at a time?

Are your complaints the same throughout the day and night, or do they remit at intervals; how often, and for what continuance at a time?

Are you quiet or restless?

Do you complain of cold and shiverings, or of unusual and unnatural heat?

Have you pains in your head, eyes, throat, breast, stomach, belly, loins, limbs, extremities, or in any internal part, and where in particular?

Are you troubled with thirst? is your tongue foul or parched? have you a disagreeable taste in your mouth, sickness at your stomach, inclination to vomit, or loathing of food?

Is your body in a lax or costive state? how often have you stools, and what is their quantity, colour, and consistence?

Is your urine lessened or increased in quantity since your indisposition? is it pale, or of a deep colour? is it clear, or

cloudy? and does it drop any sediment, and of what appearance?

Do you breathe freely?

Are you troubled with any cough; and is it a dry cough; or do you expectorate?

Do you rest well; or is your sleep broken, disturbed, or interrupted?

Do you perspire much by night, or after using common exercise by day?

What medicines have you taken since you have been sick; and what effects have they produced?

What operations, or evacuations, have you undergone; and what has been the consequence of them?

Is this the first time you have been attacked with this disease, or have you had it before, and how often?

To Women.

HAVE your periodical discharges commenced, and are they regular or irregular, moderate or immoderate?

Are you pregnant, and how far are you advanced?

Have you been delivered of a child, and was your delivery attended with any particular circumstances?

Did your milk come in proper time, and in due quantities?

Do you suckle your child, or has your milk been repelled, and by what means?

Are you subject to those discharges which are commonly called the whites?

Questions concerning Children.

HOW old is the child?

Has it cut any teeth; and what number?

Was the teething attended with great pain, or with convulsions, or other particular disorders?

Is it troubled with rickets, knots, or knobs in the glands, or any other complaint; and of what nature?

Has it had the small-pox, the measles, the chicken-pox, and the other eruptive diseases to which children are liable; or any, and which of these disorders?

Does it discharge worms, either by stool or vomit?

Is it's belly hard, swelled, and uncommonly large?

Does it rest quietly, or is it's sleep disturbed?

Though, as we have already observed, it is impossible to frame any general set of questions to answer every particular purpose, yet the list we have given will naturally suggest such others as may be necessary in almost every case to which they do not particularly apply: and with respect to women and children, we have noticed enough of those complaints to which they are peculiarly liable, to lead to most others. It is unnecessary to remark, that all the questions directed to the men are also applicable to females and infants.

And before we conclude this chapter it may not be improper to mention a common yet dangerous error, into which sick

persons in the lower ranks of life are too apt to fall, from prejudices formed on opinions collected in conversations with each other.

When any of these classes call in medical assistance, they apprehend the skill of the physician is competent to a discovery of all their complaints, by an examination of the pulse and inspection of the tongue and water; and therefore obstinately refuse to give him any other information, alledging, as an excuse, that their accounts may mislead a judgment which can be much better grounded on the doctor's experience than on any intelligence he can receive from the sick.

To obviate this pernicious idea, it is only necessary to remark, that the pulse, tongue, and urine, will be affected in exactly the same way, in a great variety of different disorders, but that the feelings of the patient will find out with certainty the nature of that with which he is afflicted; so that it depends on the sick man himself, to point out his disease, and on the physician to prescribe for it, according to the exigency of the case, which will be determined by the pulse and other appearances abovementioned.

B O O K XIII.

Of certain Articles in common Use, which can neither be considered as Food or Medicine.

C H A P. I.

Of Indulgence in these Articles.

IT is somewhat extraordinary that habits should prevail and become general, which, however use may reconcile men to them, must at first be so extremely disagreeable, as to require no small degree of determined resolution to get the better of actual aversion, and that in the conquest of this aversion, they should encounter pain, nausea, and actual indisposition, though the object they pursue, and in the attainment of which they submit to such unpleasant sensations, is not in the event productive of the smallest advantage, either in the improvement of health, or in real additional comfort.

Yet, whoever will offer *tea*, *tobacco*, or *snuff*, to one who has never tasted the two former, and who is wholly unacquainted with the smell of the latter, will readily perceive that the former creates dislike, and the two latter disgust, and that he will experience all the inconveniences we have described, before his palate and smell will be reconciled to these at present universal regales.

Nor will it be contended that the general and constant use of either of those exotics, is attended with the smallest advantage; for though tea may have some good qualities, taken in moderation and in a proper manner, yet these are destroyed by the constant and immoderate use of it;

and tobacco and snuff are in general so far from being useful, that they are more apt to create than cure disorders; not but there may be cases in which they may be applied to advantage medicinally, though they are rendered inefficacious even in this way, by the unvaried practice of taking them; not as contributory to health, but in compliance with custom; for it can hardly be conceived that the gratification of pleasure can be really consulted in smoking or chewing tobacco, or snuffing the powder of it up the nostrils.

And as neither of these articles are contributory to health, in the manner which custom has prescribed for using them, so it is more than probable that they are actually prejudicial, it being an opinion which appears to be founded in reason, that whatever is conveyed into the human body in considerable quantities must either be productive of advantage or injury to the constitution.

But besides these, there is still another exotic of a much more dangerous nature, which though not in general, is yet in too common use; this is *opium*, an admirable drug, prescribed in proper quantities, on occasions which require it; but which, as an article of luxury or indulgence, brings on a species of present intemperance, and is pregnant with future mischief.

C H A P.

C H A P. II.

Of Tea.

THOUGH this herb is universally known in the state in which it is imported into Europe, yet, as few plants of it have ever been raised in this country, and those are confined to hot-houses, and arrive at the best at a very imperfect state, it may not be improper to give some account of the growth and cultivation of this shrub, in the countries of which it is a native.

The tea-tree is a shrub that grows but slowly; it rises to six feet, and sometimes higher; has a black, woody, irregular, branched root. It's bark is dry, thin, weak, chesnut-coloured, greyish on the stem, and somewhat inclined to green on the extremities of the twigs; it is firm, and adheres closely to the wood, and is covered with a very thin skin, which sometimes loosens of itself, as the bark grows dry. This being removed, the bark appears of a greenish colour, and smells somewhat like the hazle-tree leaves, but more disagreeable and offensive; and it is of a bitter, nauseous, and astringent taste.

The wood is hard and fibrous, of a greenish colour, inclining to white, of a very offensive smell when green; the pith, which is very small, sticks close to the wood.

The branches and twigs are many in number, growing without any order, slender, of different sizes, though short upon the whole, wanting those rings which in some trees and shrubs denote their yearly growth; very thick beset with leaves, without any order, on short, fat, green footstalks, roundish and smooth on the back, but hollow, and somewhat compressed. On the opposite side stand the leaves: these are of a soft substance, between membranous and fleshy; in substance, shape, colour, and size, when full grown, like the Morella

cherry-tree. The larger leaves are near two inches long, and one broad, but vary in size; from a small beginning they become roundish and broader, and then taper into a sharp point. Some are of an oval shape, somewhat bent, and irregularly waved lengthways, depressed in the middle, with the extremities rolled backward; they are smooth on both sides, of a dirty green colour, somewhat lighter on the back, where the nerves being raised pretty much, leave so many hollows or furrows on the opposite side; they are serrated or indented, the teeth being a little bent, hard, obtuse, and set close together, but of different sizes; they have one very conspicuous nerve in the middle, to which answers a deep furrow on the other side. It is branched on each side into five, six, or seven thin transverse ribs, of different lengths, and bent backward near the edges of the leaves; some smaller veins run between the transverse ribs.

The leaves, when fresh, are destitute of smell, and are not as the bark, ungrateful to the taste, being indeed astringent and bitterish, but not nauseous. They differ in substance, size, and shape, according to the different age, situation, and nature of the soil wherein they grow. Were they infused, and drank when they are fresh and green, they would much affect the body, especially the hands; for, being narcotic, they would occasion a trembling and convulsive motion in the nerves: but they lose this bad quality in the drying and rolling, which expresses that clammy, yellowish, acid juice, which causes these tremors; and this juice is so corrosive as sometimes to excoriate the hands of those who are employed in roasting and rolling the leaves.

The

The branches are thick beset with flowers, one or two together, much like our wild roses, an inch or better in diameter, having little smell, composed of six round hollow petals or leaves, standing on a foot-stalk of an inch long, which, from a slender beginning, insensibly grow larger, and end in an uncertain number, commonly five or six small round leaves, which serve instead of the cup. These flowers continue growing till late in the winter; one or two whereof are generally sick, shrunk, and fall short of the largeness and beauty of the rest: they have a very disagreeable bitterish taste, which chiefly affects the bottom of the tongue.

Within the flower are many white stamina, or chives, exceeding small, as in roses, with yellow heads, shaped like a heart; in one flower there are sometimes a hundred and thirty of these stamina. The flowers are succeeded by great plenty of fruit, which is sometimes composed of one, sometimes of two, but more commonly of three pods, growing together to one common foot-stalk, as to a centre, but distinguished by three pretty deep partitions; each pod contains a husk, nut, and seeds. The nut is almost round on one side only, where the three pods grow together, somewhat compressed, covered with a thin, hardish, shining, chefnut-coloured shell, which being cracked, discovers a reddish kernel, of a firm substance like filberts, at first of a sweetish, but not of a very agreeable taste, which soon grows rougher and bitter, like that of the kernels of cherry-stones, occasioning those who chew them to spit very plentifully, and when the juice falls into the throat, it is extremely nauseous; but this ill taste quickly goes off. These kernels contain a great quantity of oil, and often turn rancid; which is the reason why scarce two of a dozen will grow when they are sown: and this probably may have frustrated the attempts which have been made to raise this shrub in Europe.

The tea-shrub is not always allowed any particular gardens or fields, but is planted round the hedges and borders of other fields; nor do those who cultivate it lay the seeds in rows, which would make it grow up into hedges, but at some distance from each other, that when the shrub comes to spread, the growing too close together may not hinder the plucking off the leaves. They put at least six, but mostly twelve seeds, as they are contained in their seed-vessels, into one hole, made five inches deep, because few are found to vegetate out of that number; sometimes two or three shrubs come up together, so closely joined, that the ignorant or inattentive would take them for one stem.

As the tea-bushes rise, the more industrious people fatten the soil where they grow once a year with proper manure mixed with earth. The shrub must be at least three years old before the leaves are plucked, and then it bears plenty of very good ones; in seven years time, or thereabouts, the shrub rises to man's height; but then it grows but slowly, and bears few leaves: but if cut down to the stem, new sets of branches and twigs shoot out, thicker and much more numerous than before, and all nourished by the same root. The young shoots, as they come up the first year from the stem, are always fewer in number, but fatter and larger than those which succeed them; in process of time they become branched.

The leaves are gathered at three different times; the first is gathered at the middle of the first moon preceding the vernal equinox. The leaves are then few in number, but very tender and young, being only of two or three days growth, and scarce fully opened. These are accounted best, and are sold dearest of all. These leaves are not gathered by handfuls, but one by one, that they may not be torn, being extremely tender; yet one person that is accustomed to it, will gather ten or

twelve pounds in a day; but those who are less experienced, not above two or three pounds.

The leaves of the second sort are larger and more grown; and, though gathered but a little after the first, bears a very inferior price.

The third and last sort is gathered in our June; this is most plentiful, the leaves being come to their full growth, both as to their number and largeness. Many omit the two former, and depend wholly on this gathering, the leaves whereof are all sorted into their different classes of size and goodness, called the first, second, and third sort; the last of which is coarsest of all, being between two and three months grown, and falls to the share of the lowest rank. Of this sort the labourers gather ten or twelve pounds a day. The longer this is kept the better it is; its virtues being fixed in the gross leaves, are not so easily lost, either by being exposed to the air, infused, or boiled; but the other sorts suffer greatly by any of the three.

When the leaves are gathered, they are brought to the warehouse to be dried the same day, over a fire in an iron pan; for if they lie long, are laid on large heaps, or kept over night, they heat, turn black, and lose much of their virtue: and if they happen to heat at any time, they presently fan them, and spread them thin on the ground to cool them. Those who are employed in this business put several pounds of the leaves into the pan at once, which is so heated, that the leaves, though thick and juicy when put in, yet soon crack at the edges of the pan: and that they may be thoroughly and equally dried, they are constantly stirred with the hands, till they are as hot as the man who attends can possibly bear them; he then takes them out with a shovel like a fan, and throws them on a mat, after which persons are employed to roll them with the palms of their hands, in small parcels, till they are equally curled;

and such a sharp, yellow, and greenish juice, sweats out of the leaves upon this rolling, as burns their hands to an almost intolerable degree; but still they must continue their work; for if the leaves are quite cold before they are rolled, they will either not curl, or not keep it long; but after they are rolled, the sooner they cool the better, for they keep their curl the longer; therefore they have one to fan while another is rolling them. When they are cold, the man who attends the drying, and who is the overseer of the workhouse, puts them a second time into the pans, and dries them again, till they have lost all their juices: but in this second heating, he stirs them more slowly than before, lest he should bring them out of their curls; though some leaves will spread in spite of all his care. After this second drying, they are carefully rolled again in the same manner as before; and if they now appear to be perfectly dry, the work is done; if not, they are committed a third time to the drying pan, and now the utmost care and skill is necessary, lest they should be burned or blackened. Some curious persons dry and roll them six or seven times, but use a slower fire, that the leaves may preserve their greenness; and because of the sharp juice which sweats out of them, the pan is clean washed after every drying. It is said that the Chinese, before they dry the leaves of the first gathering, put them into hot water about half a minute, that they may sooner and more fully sweat out a juice which they suppose to be noxious.

When they have done drying and rolling them, they again lay them out on a mat and sort them a second time into different parcels, according to their goodness, separating those which are less curled, or too much burnt, from the rest. The common people dry the leaves in earthen kettles; and as they are at a less expence this way, so they can afford them cheaper, though they are very little if any thing worse.

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The tea must be all dried in the night, being gathered in the day. When the leaves have been kept some months after these dryings they turn them all out, and heat them again, to take out any remaining moisture, or what they may since have imbibed.

As soon as the tea is cooled, after this last operation, the Chinese put it up in wooden chests or cases of fir lined with lead, all the chinks whereof are carefully stopped with paper, that the air of those climates may not dissipate it's extreme subtle and volatile parts; and in this manner it is sent to Europe.

Tea has not been known in Europe quite two hundred years; the Dutch East India company, who first imported it, and raised it's reputation with us, was founded in 1602. The English East India company was formed near the latter end of Queen Elizabeth's reign, their charter bearing date in 1599, and their fleet set out in 1600; but they made no figure till King James the First bestowed his favours on them. The French East India company was established in 1664.

The Dutch, in their second voyage to China, carried thither a large quantity of dried sage, and exchanged every pound of it for three or four pounds of tea, extolling the European herb, and attributing to it far more and greater virtues than the leaf of the Chinese shrub could possibly be possessed of; but not exporting so large a cargo of sage as they imported of tea, they bought a great deal of the latter commodity in China, at eight pence or ten pence a pound. When this was first imported into Europe it was sold at Paris for thirty livres a pound, though it was not of the best kind, and that which was brought from Japan, and was accounted much better, has often been sold at one hundred livres a pound. About sixty or seventy years ago, the Chinese sold it at three pence, and never above nine pence a

pound, and often mixed other herbs with it to increase it's weight.

Though it seems to have been brought into England during the reign of King James the First, yet we find little notice of it before the usurpation, when, or about the restoration, it was imported in such large quantities, that it came under the cognizance of that government; for, in 1660, a duty of eight pence a gallon was laid on the tea made and sold in all coffee-houses (but it does not certainly appear whether this was the first duty laid on it, or only a renewal of it, in the same or some other shape) which was no small prejudice to the liquor, and inconvenience to it's drinkers; for the excise-officer was to survey it after it was made, before any could be sold, and did not perform that duty above once or twice a day. Ever since that time, the duty on tea has been made one of the hereditary customs to the crown, though the parliament has at sundry times, by different acts, fixed divers duties on it.

Green tea should be chosen fresh, of a fine colour, not inclining to a yellowish or a brownish colour, which are marks of too great age; it should be well rolled, consist of entire leaves, be thoroughly dry, of a bitterish gently-astringent taste, but not ungrateful, and of a pleasant smell; the fresher the tea, the greener is the infusion that is made of it with water; it's prevailing smell is that of violets, or of new hay; but if it is strong of these, it is so by art. Bohea tea is of a blackish brown colour; it gives a brown tincture to water, and smells of roses. Of all the substitutes for tea, the male speedwell is the most celebrated. The green colour of tea resides wholly in it's resinous part, and so does it's astringency.

An infusion of tea in water is a grateful diluting liquor in health, and a salutary drink in sickness; it promotes the natural excretions, excites an appetite, checks immoderate

immoderate sleepiness, and relieves the head-ache when caused by a debauch. No other plant is known whose infusion more readily passes off by the ordinary secretions, or more speedily excites the spirits. When the stomach is weak, a moderately strong infusion of tea generally provokes a vomiting.

These are the qualities of this herb, in the opinions of the most able and ingenious medical writers, whose concurrent testimony hardly admits of being disputed.

Yet certain it is, that the use of the wholesome liquor produced from the infusion of tea, is attended with fatal consequences in many instances; but it is the improper and immoderate use of it which is productive of the numerous ills attributed to this innocent herb, and not any noxious quality which it possesses: and thus intemperance and excess will convert to evils the greatest blessings of life, rendering the most nutritive food poisonous, and the most salutary liquors pernicious.

And if we consider the manner in which tea is usually taken, we shall cease to be surprized at it's producing dangerous effects. When the stomach has been emptied by the insensible as well as the sensible evacuations, and when it has remained for twelve or fourteen hours without any supply of food, it is our daily custom to pour into it large quantities of the weak and watery liquor, overloading that organ, washing it, and weakening it's tones, at a time when the powers of digestion are without employment, and it has free access to the tender coats of the stomach, which are at that time bare and unsheathed; and among the higher classes, who from late suppers, late hours, and other nocturnal debauches, are without any morning appetite, the tea constitutes the breakfast, unaccompanied with bread, or any other eatable.

But the most pernicious part of this daily ceremony remains yet to be men-

tioned; this potation is swallowed boiling hot, and being poured out in small cups, and the tea-pot replenished with water between every filling, the heat is kept up to the last dish, and during the whole meal fuel is continually adding to the fire.

Nor is the use of tea confined to a single meal; it is repeated in the same quantities, and in the same manner, a second time in the day: another load of this boiling liquid is thrown in after dinner; and though the consequences of taking it at this time of the day may not be so destructive as breakfasting upon it, yet this additional load contributes to the injury which the constitution unquestionably receives from the morning potations.

And under these circumstances it is, that we see immoderate tea-drinkers relaxed in their solids, feeble and weak in body, unable to digest solid food, and subject to the whole train of hysteric and hypochondriac complaints.

Our readers will perceive, that we mean to leave them in the undisturbed possession of their favourite liquor; which we are inclined to believe may be rather rendered salutary than pernicious, by observing the regulations which we mean to offer to those who wish to retain the use of this agreeable beverage, without present injury or future inconvenience.

We would advise our tea-drinking readers never to swallow a single dish for breakfast unaccompanied by some eatable.

To sip of the tea, and take a mouthful of the bread and butter or other food alternately, so that the solid and liquid may mingle in the stomach immediately as they are swallowed.

Never to drink it of any degree of heat beyond that of milk from the cow.

Never to drink it without sugar and milk, if the latter is to be had, but by no means without the former.

Not to exceed, at any one time, four common tea-cups, or about half a pint.

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Not to drink tea late in the evening, or to take it the last thing before retiring to rest.

Under these restrictions, a conformity to

which is attended with no sort of difficulty, tea may be used freely, without the smallest apprehension of producing indisposition, or injuring the constitution.

C H A P. III.

Of Coffee.

THE word *coffee* is, derived from the Arabian *caboua*, which signifying any kind of liquor, the Arabians apply it by way of pre-eminence, to that which is drawn from the berries which we call coffee, the beverage in which they most delight.

The tree or shrub which produces coffee is somewhat of the jessamine kind; its leaves resembling in colour and figure those of the bay-tree; the fruit is a juicy berry which incloses two seeds, of a pale colour and oval shape, flat on one side and convex on the other; and these join on the flat sides, having each a small furrow to admit a kind of filament or thread, which passes from the stem of the fruit to the opposite extremity.

The coffee-tree is a native of Arabia Felix, and probably of the island of Java in the East-Indies, where it is now cultivated in considerable quantities, producing those seeds, or, as they are commonly called, berries, which are imported into England under the name of East India coffee, to distinguish it as well from Arabian, or, as it is more commonly called, Turkey coffee, and that coffee which is the growth of the West Indies, where it has been introduced from Arabia, and from whence the European markets are supplied with large cargoes of this commodity; though that which is imported from Arabia is preferred to either of the other sorts, from which it may be distinguished by the smallness of the berries,

and the colour of them being rather more transparently grey, than either the East or West Indian coffee.

Many Arabians of rank prefer the husks or skins which inclose the seeds, which are in fact the berries themselves, in a withered or dry state, to the berry, and are of opinion that the decoction is of a more pleasant flavour; but this part of the coffee fruit will not bear keeping, and consequently cannot be exported.

Coffee was scarce known in Europe till the seventeenth century: the first coffee-house in London was opened in the Tilt-yard in the year 1652. In Paris, where it is now much more universally used, it was not introduced till sixteen or seventeen years later, though it had been tasted at Marseilles even earlier than in England. Soon after it began to be drank in London, two foreign writers published dissertations on its nature and qualities, one in German, the other in Italian.

The berries or seeds of coffee are nearly without smell, but have a mealy, oily, and somewhat bitterish taste; in common with other farinaceous substances, they are of a flatulent nature, but lose that quality by burning or roasting. Chymists and naturalists have endeavoured to discover what substances most nearly resemble coffee in taste and smell, and find that roasted rye and roasted almonds mixed,

but in a less proportion of the latter to the former, as being only necessary to supply the oleous part, comes the nearest to it; and this is probably the composition which has been sold under the name of English coffee.

When the roasted berries are reduced to powder, they soon lose their smell and flavour, but keep well in the berry; and if before they are ground for use, they are placed before the fire for a few minutes, and powdered whilst they are warm, the liquor drawn from this powder will be as brisk and highly flavoured as that which is made from newly roasted berries.

Contrary to the usual practice, coffee is thought to be most wholesome when it has been boiled eight or ten hours before it is drank, and it should then be mixed with an equal quantity of milk.

Taken within an hour after dinner, it is said to moderate the fermentation of the aliment, and to be of use in head-aches, occasioned by weakneses of the stomach, too

close attention to study or business, or excesses; it is also supposed to assist digestion, and to be somewhat antiputrescent; and it is recommended to those who are corpulent, phlegmatic, and apt to be disturbed and agitated.

But it is astringent, heating, and drying; and the use of any considerable quantities of this liquor renders the body thin, and the complexion pale and yellow: the moderate manner in which it is taken in England seldom produces any of these inconveniences, but the Turks and other Mahometans, whose religion does not permit them to indulge in wine or other strong liquors, drink amazing quantities of coffee; and the French and other European nations generally breakfast on it instead of tea, and drink it regularly every day after dinner.

Upon the whole, it does not appear that the seed itself is unwholesome, but that the immoderate use of it, and particularly by those of thin and spare habits of body, may be attended with inconveniences.

C H A P. IV.

Of Tobacco.

TOBACCO hath large, sharp-pointed, pale-green leaves, about two feet in length, joined immediately to the stem without foot-stalks. It was brought into Europe by Monsieur Nicott, a Frenchman, from whom it is called Nicotiano; he brought it from the island of Tobago in America, about the year 1560; but it is now cultivated in many parts of Europe, and particularly in very considerable quantities about St. Omer's, and other towns in French Flanders. Sir Francis Drake first brought it into England; and Sir Walter Raleigh introduced the use of it as a kind of fashion in England.

The leaves have a strong disagreeable smell, and a burning acrid taste; they give out their active parts both to water and to spirit, but most perfectly to the latter; but their acrimony is much abated in the tincture, the watery extract being less pungent than the leaves themselves; and the spirituous not much more so. The American tobacco is stronger than that which is raised in France, or the small quantities cultivated in England, and affords a more fiery extract, though in less quantity.

If tobacco is taken inwardly in a small dose, or if a decoction of it is used as a clyster, it proves violently cathartic and emetic, occasioning

occasioning extreme anxiety, giddiness, stupefaction, and disorders of the senses; however, some have ventured on it in some obstinate chronical disorders. By long boiling in water, it's deleterious power is abated, and at length destroyed. The smoke of tobacco received by the fundament, is of singular efficacy in obstinate costiveness of the belly, for destroying the worms which infest the extremity of the gut; and for recovering persons apparently drowned.

Tobacco is sometimes used in lotions and ointments for cleansing foul ulcers, and destroying insects in the skin; it is destruction to all insects whether in the vegetable or animal world. Beat into a poultice with vinegar, and applied to the region of the hypochohndriac or spleen, it hath been known to discuss humours there.

A constant chewing or smoaking of tobacco destroys the appetite, by depriving the constitution of too much saliva; however, though it is improper for lean, dry, and hectic habits, moderately taken in either way, it may be useful to those of gross habits and very moist temperaments, and to such as are subject to diseases of the colder kind. When the gums are overcharged with rheum, or when the lungs are swelled and inclined to imposthume, tobacco may be useful.

The oil of the tobacco which ascends in the smoak, blackens the teeth and decays them, and the continual use of the pipe occasions a perpetual thirst, which inclines the smoker to indulge in a greater quantity of liquors, than is consistent with health or sobriety.

Nor are instances wanting of very dangerous effects produced by this very acrimonious herb.

A young recruit who had been enlisted in one of the interior provinces of England, and sent up to the Savoy, having learnt in his new profession to drink drams and chew tobacco, and having in a state of intoxication occasioned by the use of the

former, swallowed a quantity of the juice of the latter, from a large piece of it with which his mouth was crammed, was seized with a vomiting which was soon followed by a purging, and the discharge both ways was enormous, and both tinged with blood. After these evacuations had continued violently for about an hour, he fell into a profound sleep, from which, however, he awoke in strong convulsions; and in the remissions, he seemed to have lost his senses, laughing and crying alternately, his sight seemed exceedingly obscure, he was totally without recollection or knowledge of those about him, and seemed to be completely mad.

Growing more composed after some time, he slept again, but his breathing was difficult, his lips swelled, his face became red and blotched, his lower-jaw dropped, he was covered with cold sweats, and at times apparently dead, till the vomiting recurred, and the retching and sickness seemed to restore his life.

Being young and of a strong and robust constitution he recovered, but he complained for a long time after of a sensation like fire in his stomach, and had a continued hic-cough, which was conquered with great difficulty.

A woman servant to a gentleman in the country was advised to thrust a piece of pig-tail tobacco up her nostril, as a remedy for giddiness in the head; she accordingly suffered it to remain there when she went to rest, laying her head off the pillow, as may be supposed to favour any defluxion which it might occasion; but soon after midnight she awoke intolerably sick, vomitted frequently and very violently, and fell into strong hysseric fits, in some of which she lay as if she was dead for a considerable time together, and when these fits left her, became stupid and sleepy, her mind seeming disturbed, and her pulse irregular and unequal. After some time she fell into a profuse sweat, emitting a most offensive cada-

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verous smell, but this evacuation brought her relief, though she continued for a long time after to be affected with a trembling of the limbs, as if she had been paralytic.

A person had a contusion on the thigh, accompanied with a wound, and attended with some alarming symptoms; to this wound an ointment was applied by the direction of a surgeon, who had conceived an opinion of this herb, in which the powder of the dried leaf of tobacco was an ingredient; but soon after this application, the patient was seized with excessive vomittings, which could not be restrained without extreme difficulty; and the cause not being immediately discovered, the tobacco dressing was renewed, when the same consequences ensued, which having pointed out the occasion, the dressings were changed,

and the tobacco omitted, after which the vomiting went off spontaneously, and came on no more till the cure was completed.

When from any inadvertency quantities of this herb, or of the juice of it, have been taken internally, and have produced all or any of the effects above described; the unlucky patient should be treated in the same manner as we have already directed for those who have swallowed any of the vegetable poisons.

Even the smoke of tobacco frequently produces very severe sickness, giddiness, and other indispositions, to those who are unused to it; and those who are accustomed to smoke, but happen to sleep with pipes in their mouths, and by that means swallow the tobacco-smoke, are frequently affected in the same way, waking in great agonies.

CHAP. V.

Of Snuff.

THE dry leaves of tobacco reduced to powder by grinding, rasping, or beating, make what is called *snuff*.

We may better judge of the effects this powder may produce on being taken into the nostrils, if we acquaint ourselves with the structure of the parts which it may reach. And this ought to have been a consideration prior to the first use of the herb in that manner; and it may be affirmed, that, if it had been so considered, this method of taking it could never have been introduced.

No part of the human frame is more delicately sensible than the nostrils; which are covered, in a manner, with branches of nerves; and these so thinly guarded from the air, that the brain itself may be said to lie, in a manner, naked there. This

construction was essential to the delicate sense of smelling; the provision made for which is, like all other parts of the human frame, the apparent work of Infinite Wisdom.

These nerves easily irritated, are as easily destroyed. Nature is always on her guard against injury, and will use violent, and even convulsive efforts, to preserve herself; but the industry of man may overcome them all. Thus, when snuff is taken, by a person unaccustomed to it, the irritation is excessive, and ends in sneezing: this is a successful effort of nature to throw off the offending matter. The acrimonious powder is only received into the open nostril; it is from thence immediately expelled by the shock: and being followed by a plentiful discharge of watery fluid, every remain
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of it is washed away, and in this case the snuff acts by it's acrimony only: there is not time for it to exert the other pernicious qualities which it possesses in a strong degree.

The effects we have described are those which take place on a person unused to snuff: custom gets the better of nature's abhorrence to that powder. A due degree of this effect can only be produced when the nerves of the nostrils are in a perfect state; the acrimonious substances which first irritate those tender organs, afterwards destroy them: and on this account persons who are habituated to snuff-taking, no longer sneeze when they take it. The powder, which at first excited those irritations by which it was thrown off so violently, is permitted to lodge and to exert all it's force; thus are the nerves corroded, their delicate sensibility destroyed, and the sense of smelling impaired, and at length totally lost.

Nor is this all; nature, who provides for many purposes, in the same way, constituted this delicate sensation of the nostrils, not only for the agreeable and useful sense of smelling, but to defend and guard those second passages to the throat.

The passage by the mouth we can shut at pleasure; but these other inlets are continually open; and without some particular guard, substances improper to be swallowed might get down this way by accident, besides the acrimonious powder which is forced in by art.

But nature has given against these accidents a kind of external defence, in those short hairs which grow near the openings of the nostrils; and to men a much greater, which custom takes away in most parts of the world, which is the part of our beard that grows on the upper lip. These natural guards will in a great measure prevent the intrusion of offensive substances; and if they should find admittance, we have still

another provision against our suffering by them, in that delicate sensibility in the nervous lining of the nostrils, which, on the first touch of any thing acrid, produces sneezing to cast it off.

But these provisions of nature against the accidental swallowing of acrimonious things, are industriously subverted in snuff-taking. A few scattered hairs are no defence against the application of a finger and thumb pressed to the very opening of the nostril, and charged with snuff which is drawn up with the force of all our breath: for this is the manner in which we compel the nostrils to receive this acrid and more than half poisonous powder of tobacco: and, by continued repetitions of this application, those nerves are destroyed which would excite sneezing to discharge it.

And in this manner is the snuff received and retained in the cavity of the nostrils: tincturing the fluid which is naturally discharged by the glands of the nose; and some of this making it's way unopposed, with the saliva or proper liquors of the mouth, will be drawn into the stomach; and it is here only according to the judgment of some physicians that it begins to be injurious; but we shall hereafter offer the reasons which have induced us to form a contrary opinion.

It is an unquestioned fact that the saliva assists the juices of the stomach in the digestion of our food: it cannot therefore be increased without hurt, nor altered in it's quality without injury. The acrimony of snuff tends to produce the former effect, by stimulating the glands which discharge the saliva; and that it's very nature is altered, is apparent by the tincture which it gives, and which must be, from the quality of the herb, stupifying and acrimonious.

We know that all substances of this kind weaken the stomach, destroy the appetite, and prevent digestion; but this by the mixture of a peculiar acrimony, disturbs the

natural operations of the stomach, even while it's force is destroyed by the stupifying quality.

Hence it will appear that a habit of taking snuff must occasion disorders of the stomach, and bring on all the mischiefs which attend a bad digestion. But there is yet to be considered the gullet, or passage from the mouth to the stomach, through which it must pass down; the construction of which is as delicate and as sensible of injuries even as the membrane of the nostrils; besides this farther dreadful consideration, that injuries to this part are beyond the reach of art, as it is too far removed from the surface of the body to be capable of relief from the surgeon's hand, and therefore hurts of it are in many cases mortal.

The gullet has, as well as the stomach, a great number of nerves, extremely sensible of irritation; but, besides these, it's inner coat being full of open vessels, it is greatly irritated from the tincture of the snuff even before that tincture reaches the stomach.

Snuff does not cause those to sneeze who are accustomed to it, nor are they disappointed; for they neither expect or desire it should. This is, indeed, the immediate cause of it's effective qualities, but it is also attended with the most imminent danger. The delicate and downy substance of the lining of the gullet, while it receives the virtues of the saliva, strongly impregnated with snuff, may by accident also detain a portion of it; and from the irritation which it will occasion, when lodged upon so tender a part, and which is so largely supplied with blood-vessels, an inflammation will naturally arise beyond the reach of any hand, with an extension of the injured part, the progress of which can hardly be stopped, and the end of which must be most probably fatal.

According, then, to the progress of this pernicious powder, the first effect of it will be on the nerves of the nostrils, where it is first received; and which, from their own

tender nature, and the acrimony of the powder applied to them, will be destroyed. And this will certainly happen from a continued use of snuff; but the mischief will be compleat sooner in some than in others, according to the particular structure of the part, which is not exactly alike in any two human bodies.

When these nerves are destroyed, the sense of smelling, which depends on them, will perish of course; and, in some degree also, that peculiar sensation which is of a middle nature, as it were, between smell and taste, by which we distinguish the more delicate flavour of what we eat; and which we have described and accounted for in a former part of this work. And though the loss of these senses is not attended with any immediate danger to life, yet it is giving up what must be allowed at least very pleasing, for a very unequal cause.

We have formerly observed, that the sense of what we call the flavour of fruits, and of the more delicate foods, depends, as well as every species of taste, upon the nerves, which are distributed over the surface of the tongue; and as the last is always impaired, so is the former utterly lost by the immoderate use of snuff.

But as the distinguishing sense of the different flavours of bodies, is a more delicate kind of taste, it will therefore be first injured; especially as the mixture of smelling, which is evidently concerned, shews that the nerves of the nostrils have some share in it.

In order to enjoy this sense in perfection, the nerves must be kept in an uninjured state, and the mouth must have a due degree of moisture, but not an excess. For which reason, infants, whose mouths are more moist than those of men, have not the same delicate sense of it, the extremities of their nerves not lying sufficiently exposed; and in persons of very advanced ages this sensation is less delicate, because
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the nerves are wasted. Snuff will reduce those who use it to a worse condition than either infants or the aged: it always tinctures the fluid of the mouth, and sometimes by accident gets down in substance; and in this last case acts violently on those tender and almost naked nerves, from which we enjoy the flavour of the nicer foods, and by it's acrimony would presently destroy them, but that a great quantity of water being drawn immediately into the mouth, by the effect of the same acrimony on the glands, the nauseousness of it's taste occasions natural and violent efforts to spit it out.

The snuff, therefore, which falls entire into the mouth, is soon washed off from the surface of the tongue, and discharged; but not till it has first injured very severely the nerves of the part on which it has immediately fallen.

But the saliva, continually tinctured by the snuff, and spread over the tongue, being suffered with less violence to nature, lodges there at all times, and works slowly, but certainly the very same effect which the snuff in substance would have done if it could have remained in the same situation; destroying entirely by it's acrimony the exterior branches of the nerves of the tongue, in the same manner as a drop of oil of cloves, or of tobacco, which act alike in this respect, will destroy the nerve in an aching tooth.

It has been always remarked, that the slower operations are generally the most sure. At first, when the habit of snuff is new, the quantity taken is but small; and of that by far the greater part is thrown off by sneezing, or is blown out of the nose soon after it is snuffed up, in consequence of it's irritation; yet the liquors both of the mouth and nose are somewhat discoloured by it. Thus far the taste, though in itself disgusting, is but slight, the tongue bears it, though not without uneasiness, yet without being much of-

fended; and beginning to be accustomed, it gradually bears a little and a little more: it's own exquisite sensation begins also by almost imperceptible degrees to be palled; and after some time is so far lost, that although the taste of sweet and bitter, salt or sour, poignant and strong, and the other coarser distinctions may remain, yet that delicate sensation, which we have already mentioned as the taste or distinction of flavours, is altogether lost.

And if this were all, one should be apt to think any reasonable person would apprehend it too much to sacrifice for the indulgence of snuff: yet this is not the case; those who have so totally lost the most delicate sensation of flavours, must have impaired their tastes with regard to other matters; imperfections which come on slowly, are not easily perceived, but should therefore be more strictly guarded against; and it would be worth while for any man to consider, before it is too late, whether he will indulge in a habit of taking snuff at the certain expence of two of his five senses; and whether for the sake of that ridiculous and absurd custom, he will give up forever the fragrance of flowers, and the flavour and fine taste of fruits, foods, and wines.

And even if there should be any, who after this state of the account are of opinion that the indulgence of snuff is worth this price, let them be told, that these are the least of the many sacrifices which they may in the end be compelled to make to that practice: the physician and the surgeon must probably be consulted for other consequences; and, besides giving up some of the most pleasing sensations which the human frame is capable of receiving, they must expect it's worst imperfections and most painful and dangerous diseases.

Snuff is by it's acrimony capable of producing, in those parts with which it immediately or accidentally comes in contact, swellings and excrescences, which, in some

some cases, require to be extirpated by severe operations of surgery; and in others become fatal, because they lie beyond the reach of the operator: and the participation of it's qualities to the juices of the mouth and throat, may in time so far pervert and impair the actions of the stomach, as to bring on a variety of diseases.

But though snuff effects the mischiefs we have described in some instances, yet it does not always appear to be attended with the same consequences; nor is this surprising. In many persons it occasions disorders, which perhaps are not attributed to it. But though it should be admitted that but few are injured, in comparison to the numbers of those who take snuff, is it not the extremest folly to risque being among the list of sufferers? And, if only two in twenty ruined their constitutions by it, who shall be able to say, when he acquires this habit, whether he shall be one of the eighteen who escape, or of the unfortunate two who are destroyed by it?

An elderly gentleman, who had been many years addicted to snuff-taking, was by degrees affected with a kind of suffocation, and could not breathe but with his mouth open; from his right-nostril hung the end of a polypus, or fleshy tumor, the remainder of which filled the cavity on that side, and entirely prevented his breathing through that nostril; the other he could make very little use of from a like cause; nothing, however, appeared externally on that side, but the same swelling was perceivable within. Yet among all this unfortunate person's sufferings, nothing seemed to affect him so much as his being no longer able to take snuff, to which he had been so long accustomed.

Some time after, a surgeon of eminence undertook and performed a cure, after many had declined it; which he compleated by attacking, from within his patient's mouth, what could not be got at by the way of the nostrils. But the greatest ad-

vantage of all was, that his long disuse of snuff, with the sense of the mischief it had done him, prevented his returning to the custom, and insured a continuance of his health, which he enjoyed for many years after, uninterrupted by the smallest return of his old complaint.

A gentleman somewhat advanced in years, having been early accustomed to snuff, and finding himself unhappy, that, from the constant and long use of it, he felt less and less of the effect, endeavoured to find some of a stronger and more acrimonious kind, and at length met with a sort which gave him the highest satisfaction; for, whether it arose from peculiar management of the tobacco, or was occasioned by the addition of some other ingredients, the snuff he had now discovered was so acrid, that few beside himself could endure it.

But the pleasure which he found in his new acquisition was but short-lived; for, after a little time, two swellings of a fleshy substance were perceived in one of his nostrils, and one in the other, which grew so fast, that in eight or ten days one of them hung a considerable way out of one nostril, and the others began to be visible in the opening of the other.

The large swelling which filled the right-nostril alone, having thrust itself out beyond the end of the nostril, began to grow the other way also, and forcing itself back through the opening of the nostril into the mouth, increased there very fast, and reduced him to a miserable condition: his breathing and swallowing were attended with great difficulty, and he could hardly speak so as to be understood.

These swellings appearing of a deep crimson, and being extremely painful, he was at first alarmed with the apprehension of a cancer; but a surgeon being sent for, he was soon eased of his anxiety on that score, though the cure of the real disorder was not effected without great pain. The acrimony of the snuff only had occasioned the

the swellings, which there was no possibility of dispersing, or any other way of getting rid of, but by cutting them out, which was performed with success, and the blood that followed the instruments also carried off the inflammation. This operation was absolutely necessary to the preservation of life; for, that part of the large polypus which had extended itself to the mouth, increased so fast, that the patient was in imminent danger of being suffocated.

Another gentleman, equally unfortunate, after a long and immoderate use of snuff, found that his breath passed with difficulty through one of his nostrils, the complaint gradually increased, till he perceived a swelling within, which was hard, but unattended with pain. It continued, however, to grow slowly, till at length it filled up the whole nostril, and by the swelling obstructed the breathing of the other: he now found it necessary to apply for assistance. The swelling turned quite black, and adhered by a broad base, so that it could neither be taken away by the knife or ligature: it still, however, occasioned no great pain, but an unconquerable itching in the lower part of it. He was earnestly cautioned to avoid scratching it, but in vain: he could not be prevailed on to forbear, and the consequence of his persisting was a discharge of a thin acrid humour, with dreadful pain, and all the frightful symptoms of an open cancer. He tried hemlock, but without success; it produced no good, though it had no ill effect in him, and he lingered out his life without relief, or even hope.

These cases, in both which the complaint first appeared after taking a kind of snuff different from that to which the person was accustomed, though sold under the same name, afford reason to suspect, that ingredients of a worse nature than tobacco itself are sometimes added by bad persons to the composition of snuff; and it has been confidently asserted by some persons, that glass reduced to powder is among them; though

we hope, for the credit of humanity, that it is impossible to find any person base enough to administer poison in this way for the sake of private emolument.

But if it should be argued, that the polypuses which attack snuff-takers are not absolutely caused by that custom, and that the principles of the disorder were there before; yet it will not be denied that snuff irritates the parts and hastens the mischief; and even supposing the latter only to be the case, the injury is certainly greater than the indulgence is worth: nor can it be absolutely pronounced that snuff is not the cause, or determined who has or who has not the seeds of such a disorder as snuff may bring into action.

And as cancers of the nose are as dreadful and as fatal as any others, it is certain that snuff must be of all things in the world the most dangerous, where there is the least disposition toward them; for, in such cases, almost all that can be done is, to keep the parts quiet, and the irritation of them is most to be avoided; and nothing can be conceived so irritating as the snuff which is perpetually poured up the nostrils.

But the injuries occasioned by snuff are not confined to the nostrils; the throat or gullet partakes of them; and not only reason but experience shews it may do the most terrible mischief there.

A poor old woman, in a distant part of the kingdom, was reduced to such a state by a swelling within her throat, that she was fed with broth by means of the stem of a tobacco-pipe; by sucking at one end of which, while the other was plunged into the basin, she could with great difficulty, and in the space of an hour or more, get down as much as was sufficient to support life. The account she gave of the beginning of the disorder, was, that it arose from swallowing some snuff, which she had too hastily drawn up her nostrils.

A similar instance is recorded in medical books: A person who took great quantities

of snuff, perceived, after a time, a disorder in his throat, occasioning a difficulty of swallowing. No medicines could reach the cause; and when an instrument was thrust down, it stuck at a particular place, and neither art nor violence could get it farther. He became by degrees unable to swallow any solid food, and in the end even liquids could not pass: by this means he gradually wasted to a mere skeleton, and at length died famished, his swallowing being totally obstructed. Being opened by the surgeon, a polypus was found in his throat like those which are usually formed in the nostrils, which filling up the whole passage of the gullet, ran down from the place of its origin to the length of several inches: and many disorders probably originate in the same way, though the causes of them may be overlooked.

From the gullet to the stomach, the passage is open and immediate; and thither the powder itself may accidentally be conveyed; but should that not be the case, the liquid of the mouth, which is so essentially necessary to digestion, passes into the stomachs of those who take a great deal of snuff, highly impregnated with the stupifying and acrimonious qualities of this powder of tobacco.

This the stomach having been accustomed to by degrees, and being brought step by step to endure it, even when very strongly saturated, does not throw off by violent efforts of vomiting; which is the case, when a quantity of it falls by accident into the stomach not thus habituated; but it remains in that organ, mingles with the subjects of digestion, and the effects of it will, unquestionably, be perceived at some future period.

For a perfect and delicate state both of the parts and juices are required to compleat properly the work of digestion: and, in this case, the inner coat of the stomach receives material injury by the continual application of this acrimonious substance;

and the juices which should operate in digestion, are materially altered for the worse, being rendered acrid instead of mild; and from dissolvents, acquiring a power of hardening, in a certain degree, what comes in their way: a circumstance which may be proved by covering a piece of flesh with an infusion of tobacco-leaves in water, which will be found to possess in some measure the quality of the infusion of oak bark, which is used by tanners to harden animal substance; or the red water which lies on bogs, and which also has some portion of the qualities of tan; hardening this animal substance, and rendering it tough instead of softening, and by degrees dissolving it, as would happen from common water. Bodies of persons who have unhappily perished in bogs, have, after a great length of time, been taken up, neither softened or corrupted, but entire and more firm than human flesh in its natural condition; the power of tan upon leather in hardening of it to a great degree is well known; and an infusion of tobacco will produce the same effect.

And such is, in some respects, the juice of the mouth, when it passes into the stomach, impregnated by tobacco. For though it may not be of strength to harden animal substances, to the degree we have mentioned; yet in proportion to its strength, it operates in the same manner: and, the business of digestion being to soften and reduce the food which is swallowed to a kind of pulp, whatever in the least tends to harden what should be thus softened, acts in direct opposition to digestion, and impedes that necessary operation.

Windy or flatulent complaints in the stomach, are the natural effects of indigestion; and on this principle, the most obstinate and incurable flatulencies are occasioned by snuff. Many of the diseases to which mankind are subject originate in a bad digestion; and we trust we have sufficiently shewn that indulgence in the custom of snuff,

snuff, lays a foundation for the worst disorders; depraving and vitiating that juice, without which digestion cannot be performed.

But the advocates for tobacco have contended that it reduces corpulencies, and will take away unwholesome and troublesome fat; and though it is in some degree true, yet this is performed by spoiling the digestion; and therefore should by no means be mentioned in praise of the herb, as it always leaves worse complaints in the place of that which it may contribute to remove, of which the following instances may give sufficient proof.

A gentleman of a good constitution, and fond of exercise, grew fat in spite of all endeavours to keep it down; in this condition he was advised by some officious friend to chew tobacco; and pursuing this advice, he certainly grew thin, and got rid of a drowsiness which had hung upon him a considerable time, and seemed to threaten a lethargy; but the effect did not stop where he desired, his digestion being enfeebled by the tobacco, his flesh continued to waste, he became subject to terrible bilious vomitings; and after being reduced to a perfect skeleton, died notwithstanding the best medical assistance.

A person who was troubled with a constant burning in his stomach, and a strange and continued tendency to vomit, apprehended his complaint arose from the gout, and was treated accordingly. He always awoke with a taste of ashes in his mouth; and was tormented with an intolerable heartburn: after which he grew sickish, and unless he took something immediately, vomited an acrimonious, thin, and yellow liquor. Upon consulting a physician, he was of opinion the disorder was not the gout, nor did there appear any thing in the patient's constitution that should occasion it: but, upon minute enquiry, it was discovered that he had about four months before got into a habit of taking snuff; this

he was advised to leave off at once, and in consequence, every troublesome symptom vanished; and persisting in renouncing snuff, he had no more gout in his stomach.

Even the continual yawning to which some people are subject to a very unpleasant degree, is more than commonly troublesome to those who take snuff. Yawning is occasioned by irritation, and it's seat is in the gullet; the inner coat of which being, as already described, extremely sensible, discharges the irritating substance in this way, as the membranes of the nostrils bring on sneezing from the same cause.

Frequent eructations, or belchings, though they may arise from other causes, and may affect those who do not take snuff, yet are most common and most unconquerable in snuff-takers, arising in some instances evidently from that practice. Wind, bred by indigestion, is thrown out in this way by means of irritation: and the powder of tobacco is the cause of both. The liquor of the stomach, impregnated with it, becomes incapable of good digestion, and therefore wind is produced; and every pinch, as soon as the saliva in which it has been infused can get into the stomach, produces an irritation which throws that wind up. This is indeed a relief, but a most indelicate one; a much more certain method of obtaining ease is, by leaving off the custom of snuff, which is the cause, and then the disagreeable complaint will vanish, and the coarse natural means of relief be avoided.

But these are only lesser evils which snuff brings on in the stomach: the greater and more dangerous are, continual sickness and vomiting. A man naturally of a robust and corpulent habit grew weak and emaciated without any apparent cause, and seemed hastening toward his grave without being troubled with any particular disorder. The physician who attended him was of opinion, that he was injured by taking vast quantities of snuff; but he had not influence

influence enough to engage him to leave it off. He always vomitted in a morning, and after eating; and had such an habitual costiveness, that nature seemed to have discontinued the usual and necessary discharge by stool.

Finding, however, that all applications for supposed disorders were ineffectual, he was at length prevailed on to leave off snuff entirely; and taking manna, dissolved in water, and mixed with oil of almonds, by a spoonful at a time, nature resumed her accustomed course, the vomittings ceased by degrees, and the stomach recovered strength enough to perform it's usual operations.

Happy, however, it is, that, as the miserable consequences of indulging in this custom are plain, so the remedy is obvious; no medicine is necessary or useful to combat the effects of snuff; the only and certain cure is, to leave it off; this will produce a favourable effect at any time, and usually even in the worst cases: and, if the parts are so far corroded and destroyed as not to be restored, the ravage will extend no farther when the cause ceases; and life may be preserved, though probably at the expence of some delicate sensations.

But the most dreadful effect of snuff remains yet to be mentioned; this is the impression it sometimes makes upon the understanding. In some instances, it evidently dulls the apprehension; and, being long persisted in, reduces those who are devoted to it to a state of absolute stupidity, a dull-

ness of the faculties, and a kind of lethargy of the mind.

Such are the effects which some ingenious medical writers attribute to snuff; whilst others contend, that it has a very contrary effect; that it assists, instead of impairing the imagination; and that the studious, and public speakers, find great assistance from it's immediate efficacy. To which latter opinion it is again objected, that the immediate effect of snuff in quickening the imagination, is like that of spirituous liquor in raising the spirits and promoting cheerfulness: it is said to be a false fire in both; which is most perceived by those who are least accustomed to the one and the other, and wears off as they become habitual; and that those who are in the constant practice of taking snuff, feel no such effect from it.

Perhaps those who oppose snuff generally, are too severe in their remarks on the consequences of taking it, and are in many cases rather influenced by opinion, than convinced by facts, in support of all the deleterious effects which they attribute to it; and it is probable, that those who are advocates for the use of it, are themselves devoted to it, and would be more inclined to conceal than promulgate any ill consequences which they may themselves perceive to be occasioned by it. And, upon the whole, it is not impossible, but a small quantity of this powder may be used without producing fatal effects; though we earnestly advise our readers not to indulge in taking it to any considerable degree.

C H A P. VI.

Of Opium.

OPIUM is the milky juice which is extracted from the heads of poppies by incisions made in them. This juice is gradually dried in the sun to a proper consistence. It is brought from Turkey, Egypt, the East Indies, and other parts of Asia; but botanical writers assert, that the opium we receive from all the places just named, is acquired by expressing the juice from the heads of the poppies.

This drug is brought into Europe in flat cakes, or irregular masses, each from four to sixteen ounces in weight, covered with leaves, to prevent their sticking together. It is a resinous substance, softish and tenacious, especially when warm or much handled; of a dark reddish-brown colour in the mass, and yellow when reduced to powder. It hath a faint, disagreeable, stupifying smell, and a bitter taste; if chewed a little, it affects the tongue with a sense of heat, which spreads to the palate, and then in a less degree to the lips, and provokes a discharge of saliva. It heats the nose, and so irritates it as to excite sneezing.

The medical properties of opium are so numerous and valuable, that some have denominated it *manus Dei*, or, *the hand of God*. Its operation is generally accompanied with a slow, but strong and full pulse, a slight redness, heat, and itching in the skin, and succeeded by a low and languid pulse; it is also followed by low spirits, some difficulty of breathing, or a sense of tightness about the breast, a slight giddiness of the head, dryness of the mouth and entrances of the gullet, some degree of nausea, heat, and pain in the stomach; but these symptoms are to be understood of a

full dose, taken when no particular disease requires it; for very large doses are given in violent disorders, without producing any disagreeable effects.

In proper doses, repeated at due intervals, it composes and relieves violent pains, spasms, and convulsions; abates inflammation both internally and externally; moderates the heat in fevers, and assists other medicines in producing a more speedy effect; it discusses stagnate fluids, whether applied externally or administered internally; it removes obstructions arising from spasms; abates extraordinary irritability, and removes those convulsions which arise therefrom; it promotes the discharges through the skin, but retards the other evacuations; abates all kinds of pains, and totally removes some: in windy and flatulent complaints, it exceeds all of the aromatic tribe, for its efficacy extends through the whole intestinal passage.

But notwithstanding these undeniable excellent qualities of this drug, administered as a medicine, under proper cautions; an abuse of it has of late years crept into this country, which deserves our most serious notice and attention.

It is well known, that in those countries of the east, where the religion of Mahomet having prevailed, wine and all spirituous liquors are prohibited under severe denunciations of Divine wrath, the inhabitants are addicted to the use of opium, which occasions temporary inebriation, and raises a kind of false spirit; which, however, soon flags, requiring frequent supplies of the same exhilarating drug, to prevent a depression at least equal to the unusual and unnatural elevation.

Europeans, whose spirits are apt to fail from relaxation in the warmth of climates to which they are unaccustomed, have imprudently resorted to this method of supporting them; and returning to the western quarter of the world, have imported with them this pernicious custom, which, we are sorry to learn, has been imitated by those who have not the same excuse to offer, but who follow it upon principles which admit of no defence.

To dissuade men from the indulgence of this destructive habit, the best argument that can be used will arise from the state of the effects produced from immoderate quantities of this drug, with which, and the remedies, we shall conclude this chapter, remarking only, that large doses and frequent repetitions are attended, with similar consequences, and that the latter will in the end prove equally dangerous and fatal with the former.

When imprudent doses have been taken

through mistake, or with an ill-design, they are followed with immoderate mirth or stupidity, giddiness, a redness of the face, swelling of the lips, troublesome dreams, starting, convulsions, cold sweats, a considerable dilation of the pupil of the eye, imperfect speech, slow full pulse, quick breathing, nausea, itching in the skin, vomiting, madness, hiccough, fainting, and the like violent and dangerous symptoms. Immediately on the happening of such an accident, it is necessary to give a vomit of white vitriol, and repeat it four, five, or six times if the constitution is vigorous; after this, the patient should be bled, and take frequently a spoonful of strong vinegar; besides these, sharp cataplasms may be applied to the feet, blisters to the arms, clysters of tobacco-smoke may be given, and frictions may be used, as the case seems to require: vinegar is the antidote, yet cordials should sometimes accompany it.

BOOK XIV.

The British Herbal.

INTRODUCTION.

IT was our first intention to have confined this *Herbal* to such herbs and plants as are mentioned in the different prescriptions contained in this work; but on full consideration we are of opinion, that it will be useful to extend it to all such of British growth, as are recommended for medical use by others.

For though an infinite number of these herbs and plants have been long since expunged from modern catalogues of such as are appropriated to medicinal uses; and though we do not scruple to confess ourselves satisfied, that the vast variety of vegetable productions which were formerly employed in the different branches of the art of healing, composing ptisans, diet-drinks, fomentations, embrocations, salves, ointments, cataplasms, and sinapisms, are for the most part useless, and that the virtues of the greater part of them are comprized in a much narrower compass, and may be found in the different preparations of a very few drugs and minerals; yet as these latter are not always to be had, and the administration of them is not in all cases safe, especially when medical assistance cannot be procured; we have retained most of those which are to be found in any modern prescription.

And for the same reason we have added to the description of each plant and herb, an account of the virtues attributed to it, and have pointed out the cases in which it has been proved, from general report and opinion.

We have also subjoined proper directions for gathering and collecting herbs and flowers, together with their roots and seeds, both as to seasons, and the state of growth and advancement of each particular; and in which the different preparations of them either by distillation, or in syrups and conserves, are best performed and effected.

Upon the whole, we trust this part of our present work will not be found the least valuable; many are the purposes to which the vegetable produce of Great Britain may be usefully and advantageously employed: these we have endeavoured to investigate in the clearest and most concise manner; and we can at least assure our readers, that by attending to our directions they will incur no risque of injury, and that if the use of these simples should prove inefficacious, they will at least be found to be innocent.

Adders Tongue.

THIS little plant is common in our meadows; and consists of a single leaf, with a little spike of seeds rising from it's bottom, which, from it's supposed resemblance to the tongue of an adder, gives the plant this name.

The leaf is oval in shape, and the colour a fine bright green; it is thick and fleshy, and without ribs or veins. The stalk which supports it, rises from a root composed of small fibres, and is seldom
more

more than four inches high. The spike reaches nearly the same height above it; and the tongue or seed-vessel is notched on each side. The whole plant lies buried among the grass, and must be sought in April and May, dying off soon after that time, and being seen no more till the next spring.

It is a cooling herb; and an ointment is made from it which is said to be useful for wounds and external inflammations. The leaves are to be chopped to pieces, and four pounds of them are to be put into three pounds of suet and one pint of oil, melted together. The whole is to be boiled till the herb is somewhat crisp, and then the ointment is to be strained off; it will be of a beautiful green. Some give the juice of the plant, or the powder of the dried leaves inwardly, for internal wounds and bleedings; and an infusion or decoction is said to be useful for inflamed or watery eyes.

Agrimony.

THIS is a very common English plant: it flowers in the midst of summer. It grows to a foot in height, but more or less according to the soil. The leaves are winged, hairy, of a pale-green, and notched at the edges, and the flowers yellow; the root is perennial, the stalk is single, round, and strong; the flowers stand in a long spike, and are small but numerous; and the seed-vessels by which they are succeeded are rough like furze. The plant is common at the sides of hedges and near foot-paths; if the root is taken up in May, it has an agreeable odoriferous smell.

The leaves are used fresh or dry; they have been found by experience to be serviceable in the diabetes and incontinence of urine. The plant is also one of

the celebrated vulnerary herbs, and an ingredient in the right Arquebuse-water.

Black Alder.

THIS is a little shrub; the shoots of which are brittle, slender, and covered with a brown bark; the leaves are nearly round, but terminating in a point; they are of a bright green, and veined. The berries are large and black, they ripen in autumn; the flowers by which they are preceded, are small and inconsiderable, of a whitish colour, and standing on short stalks.

This shrub is frequent in moist woods; and the berries so nearly resemble those of buckthorn, that they are sometimes mixed among them by such as gather them for sale; but this may be attended with ill consequences.

The only part of the *black alder* which is used in medicine, is the inner rind; this is yellow, and is a tolerable good purge; the best way to give it is in a decoction; to make which, a quart of it must be boiled in a quart of water, and at least two drams of ginger and some carraway-seeds should be thrown in during the boiling. The quantity of the dose must be proportioned to the strength of the patient: it is recommended in the jaundice. In the North of England, they bruise the bark with vinegar, and use it outwardly for the itch, which it is said to cure with safety.

Ale-Hoof, or Ground-Ivy.

GROUND-IVY is a plant universally known; it creeps about hedges and flowers in spring. The stalks are hollow and square, and sometimes exceed a foot in length; the leaves are mostly round.

round and notched at the edges: in spring they are usually of a purplish colour, which changes to green as the summer advances; the flowers are blue, the leaves stand two at each joint, and the roots are fibrous. The whole plant has a peculiar strong, and not perfectly agreeable smell, it's virtues are at the height when it is in flower, and then it should be gathered for use.

This herb is recommended as an excellent vulnerary, either outwardly or inwardly used; a conserve may be made of it in spring; or it may be given by way of tea, or infused in new ale. It is said to be useful in all disorders of the breast and lungs, and in those of the kidneys, and to be a remedy against bloody and foul urine.

Allbeal, or Clovins Allbeal.

THIS herb is found in wet grounds, in different parts of England, having long hairy leaves, and little flowers. It grows a foot and a half high, but the stalk is weak, square and hairy: the leaves which are of a pale green, notched at the edges, and of a strong smell, stand two at each joint, and in clusters round the stalk at the joints; they resemble those of the dead nettle, but are smaller; the root is perennial and creeping.

This is said to be a good herb for wounds, but it must be used fresh. The leaves are directed to be bruised and laid upon a new-made wound; and without any addition, are supposed to stop the bleeding and compleat the cure, which perhaps might be as well effected without the application as with it.

Almond Tree.

THE bitter and sweet *almonds* differ in taste, but the tree which produces them is the same; at least it is only distinguishable by the taste of the almond, the

appearance of both being perfectly similar. It grows to a moderate size, and has long narrow leaves, of a beautiful green, and notched at the edges; the blossoms are large, of a tender red colour, and extremely beautiful. The fruit is composed of three parts, a tough outside covering, a stone within that, and in this shell the almond or kernel. Almond-trees grow frequently in gardens and plantations in England, but are chiefly cultivated in France and Italy.

Sweet almonds are admirable in emulsions, for stranguries and all disorders of the kidneys and bladder: for these purposes they should be blanched and beat up with barley-water till the liquor is like milk; in smaller quantities, these emulsions may be given to persons in consumptions and hectic disorders.

The bitter almond produces what is called oil of sweet almonds, but the cakes left after pressing afford by distillation a water that is as poisonous as laurel water, and acts in the same way.

The Aloe Plant.

THOUGH this is a foreign plant, yet as a great many kinds of the *aloe* are preserved in our green houses and stoves, it may not be improper to mention such of them as are used in medicine, and these are only two, the succotrine aloe-plant, and the common aloe.

The succotrine aloe-plant is extremely beautiful; the leaves are like those of the pine-apple, but grow to be eighteen or twenty inches long, prickly at the sides, and armed at the extremity with a large thorn. The stalk is half a yard or more in height, naked at the bottom, but ornamented at the top with a large spike of flowers, of a longish shape, and hollow, and of a most beautiful red colour.

This plant affords the succotrine or finest aloes; the leaves are pressed gently, and the juice received in earthen vessels: it is first set to settle, and afterwards dried in the sun.

The common aloe is also a plant of great beauty; the leaves are larger than those of the succotrine-aloe, being sometimes above two feet long, and an inch thick; they are indented at the edges and prickly, and like the other kind have a very sharp thorn at the point. The stalk when it flowers rises to a very great height, and is divided into several branches; the flowers are yellow, striped with green.

The hepatic and caballine aloes are extracted from the leaves of this plant; the hepatic from the clearest and finest parts of the juice, the caballine from the coarser sediment.

The succotrine aloe is the only kind that should be given inwardly; and may be distinguished from the others by not having the offensive smell which is perceivable in the common sort. It is a most excellent purge in many cases, and has been prescribed in a variety of forms, though, perhaps, the best way of giving it is in the tincture of *hierapicra*.

Common Amonum.

COMMON *Amonum*, which is more commonly called, *bastard stone parsley*, is found about the hedges in different parts of England, and grows to three feet in height, but the stalk is slender, and divides into many branches. The leaves, which are of a bright-green, appear winged, but are really composed of double rows of smaller, with an odd one at the end. Some large and very beautiful leaves grow immediately from the root; those on the stalks are smaller. The flowers are in little umbels or clusters, at the extremity of every branch. They are small and white. Each flower is succeeded by two seeds; and these are indented, small, and of an aromatic taste; the plant is distinguished at sight from all the others of the same kind, by the slenderness of its stalk and

branches, and the smallness of the umbels; but, above all, by the peculiar taste of the seeds, which have a flavour of mace.

The root of this plant is said to be good for diseases of the urinary passages, and the seeds in disorders of the stomach and bowels; and these also operate by urine. The quantity of a scruple, given in the colic, is said in some cases to prove an immediate cure; and it is a good ingredient in bitters.

Angelica.

THIS large and beautiful plant is both kept in our gardens, and found wild in some parts of the kingdom. It grows in rich soils, to eight feet in height, and the stalks are proportionably large, and divided into branches. The leaves are large and composed each of many smaller, set upon a divided foot-stalk; they are notched at the edges, and of a bright-green. The flowers are small, but they stand in vast clusters of a globular form. And each flower is succeeded by two seeds.

All parts of this plant are fragrant when they are bruised; and all parts of it are used in medicine. The root is long and large; that of our own growth may be used fresh; but fine fragrant dried roots are brought from Spain. The whole plant possesses the same virtues, being cordial and perspirative; it has been long celebrated as an antidote against pestilential and contagious diseases. The root, the stalks candied, the seeds bruised, or the water distilled, may be used. The seeds are, however, the most powerful.

Apples of Love.

THESE large juicy fruits, are not produced on a tree, but on a small low plant. The stalks of which are weak, and

and divided into many branches; the leaves are apparently large, but are really composed of many smaller ones set on a divided stalk; they are of a faint yellowish green colour. The flowers are small, and of a bright-yellow; the fruit is large in proportion to the size of the plant; and, when ripe, is of a red colour, and contains a soft juicy pulp and seeds.

The plant is a kind of nightshade, but it is cultivated in gardens. The Italians eat the fruit as we do cucumbers. The juice is cooling; and is good, externally applied, for eruptions on the skin, and diseases of the eyes, occasioned by a sharp humour.

Archangel.

THIS plant is commonly called *white dead-nettle*. It grows wild about our hedges, and in old farm-yards, under walls. It rises to the height of a foot. The leaves are shaped like those of the nettle, but are not offensive to the touch. The stalk is square, and the leaves hairy; the flowers are large in proportion to the size of the plant; they stand at the joints where the leaves are set on, in a regular and pleasing form. The leaves stand in pairs, and the root creeps under the surface of the ground, and spreads astonishingly.

The only part used medicinally are the flowers, which must be gathered in May, and made into a conserve; for this purpose, a pound of them may be beat up with two pounds and a half of sugar: they may also be dried. They are prescribed in female weaknesses, and other discharges of the like kind.

Red Dead Nettle.

THIS little plant is also called *red archangel*. It is common under hedges, and as a weed in gardens; the stalks are square, and weak, and the leaves short

and notched at the edges; the flowers which are of a red colour, grow among the leaves near the top of the plant, which is not above four or five inches high. They are shaped like those of the white archangel, but are smaller.

The leaves and flowers of this plant are used fresh or dried. The decoction is recommended for floodings, bleeding at the nose, spitting of blood, and other hæmorrhages; and to stop blood, bruised and applied externally.

Arrach, or Stinking Arrach.

THIS plant grows wild about farm-yards, and in other undisturbed grounds. The stalks are sometimes a foot long, but so weak, that they seldom stand upright; they are of a pale-green colour. The leaves do not exceed the size of a shilling, are round, and have a bluish cast. The flowers make no extraordinary appearance; and the seeds are small, standing in clusters at the tops of the branches, and are of a greenish white. The plant is distinguishable by being covered with a sort of moist dust in large particles, and by it's smell, which is extremely disagreeable. It must be used when it is fresh, losing it's virtues in drying. A syrup may be made of a pint of it's juice and two pounds of sugar, which will keep a year.

A conserve may also be made of the leaves and three times their weight of sugar. It is said to be a serviceable medicine in hysteric complaints and epileptic fits, and to promote female discharges, as well those which are periodical, as those which follow child-birth.

There is another kind of *arrach*, which is usually called *garden-arrach*: this is an annual, raised from seed, and sometimes used in the kitchen. It grows to the height of a yard, and the leaves are broad; those which rise immediately from the root have a little leaf on each side their bases. The same

same wet dust is perceivable on this as on the other kind. These leaves have a cooling and softening quality; and the same virtues are attributed to them, as to those of the wild sort; but they are less powerful.

Aron.

THIS plant, which is vulgarly called *cuckow-pint*, and *lord and lady*, is very common about the sides of the hedges. The root is in size and shape like a walnut, being brown on the outside and white within; and this, as well as the leaves and stalks, is of a sharp acrid taste; the root lies deep, the leaves are large, and in shape like the bearded head of an arrow, of a strong green colour, but sometimes spotted; among these leaves rise thick stalks, supporting a very singular kind of flower, which is long, thick, fleshy, and of a red or white colour, and the whole surrounded with a green skin or case; afterwards this case, and external parts of the flower falling off, the stem only remains, supporting a quantity of berries. The flowers open in April and May, and the berries ripen in August and September, when they are of a fine red colour.

The part used in medicine is principally the root, which is given as a remedy in palsies; half of one of the roots, fresh gathered and bruised, is said in some cases to have restored the speech at once; and the continued use of them to have compleated the cure. It is also recommended in scorbutic cases, and external obstructions; it is sometimes dried and powdered, but loses its virtue in this preparation.

Arsmart, or Water-Pepper.

THIS plant grows every where about rivers, ditches, and watery places. It rises to the height of eighteen or twenty inches; the stalks are weak, of a green or reddish colour, and jointed. The leaves

are long and narrow, resembling those of the peach-tree, and are of a bright green without spots, and even at the edges. The flowers stand at the tops of the stalks in slender spikes, and are of a whitish colour, inclinable to green: there are several other kinds of *arsmart*; and as they differ from this in nature and qualities, proper care should be taken to gather the right, which may be particularly distinguished by having no spot upon the middle of the leaf, which is found in the common kind of *arsmart*; and this has also thicker stalks, and spikes of red flowers, and is destitute of the virtues ascribed to the other sort, which is said to be an excellent medicine in retention of urine, in the gravel and stone, in the jaundice, and in the early stages of dropsies: the juice expressed from the leaves and stalks of the fresh-gathered plant is the best preparation of it; it was formerly used outwardly to cleanse old ulcers.

Artichoke.

THIS plant is of the thistle kind; and its head, which is brought to our table, owes much of its bigness and fleshiness to cultivation. The leaves are large, divided into many parts, and sometimes they are prickly; the stem is stout and ribbed, and the head is formed of large scales; the flowers resemble those of the thistle, and the seeds are winged with down like those of the last-mentioned plant.

The fresh root, sliced and boiled in water, in the proportion of eight ounces of the former to five half pints of the latter, makes a decoction which operates by urine, and is said to cure the jaundice.

Asarabaca.

THIS plant, though found wild in many parts of Europe, is only to be met with in our gardens. It is small and low,

low, and the roots creep about the surface of the ground; the leaves grow singly from the roots, and the plant is without item or stalk, but each leaf has it's separate foot-stalk, three or four inches long; and the leaf itself is round, fleshy, and of a dark green colour; the flowers are extremely small, of a dusky colour, and grow near the ground.

The part esteemed in medicine, is the root; the juice of which is given in small doses; it is dried and given in powder or infusion. It operates powerfully by urine, and is recommended in obstructions of female periodical discharges, in the jaundice, and dropfy.

The Asb.

THIS is one of the English timber trees, and universally known; the bark of the branches is grey, and the leaves winged; the smaller ones of which they are composed are oblong and indented. The flowers are of a whitish green, and appear before the leaves. The seeds are commonly called *ash-keys*, and ripen in September.

The bark of the young branches is recommended in obstructions of the intestines, particularly of the liver and spleen, and therefore may be useful in dropfies, jaundice, and other complaints which originate in those parts. It acts diuretically, and the same virtue is ascribed to the seeds, but they do not seem to be equally efficacious.

Asparagus.

OF this plant the root is useful in medicine, and the early shoots are eaten and highly esteemed at the table. It possesses virtues not unlike those of the artichoke, but in a much more eminent degree.

The *asparagus* is said to grow in some parts of England, and particularly in Cornwall, about the Lizard Point, and other places on the sea coasts; and it's root in this wild state, is better than that of the cultivated plant, but it's shoots are less esteemed. The plant grows to the height of three feet, and very much branched; the leaves are fine, and of a pale green; the flowers are small and greenish; but the berries which succeed them, are as big as peas, perfectly round, and beautifully red.

The root is advised as a diuretic, and as a remedy in all obstructions of the internal parts, and in such disorders as are occasioned by them, such as jaundices and dropfies. The method of administering it is in decoction.

Avens.

THIS common wild plant grows about hedges, and other undisturbed grounds, and rises to the height of a foot or more, but seldom exceeds fourteen inches; the stalk is firm and slender, and is divided into various branches; the leaves are large and rough, and the stalk hairy; the leaves that grow from the root are winged, consisting each of three pair of small ones, with a much larger at the end; those on the stalk are of a less size, and consist of fewer parts; but in other respects they are similar; the flowers are small and yellow; and are succeeded by rough heads, as big as a horse-bean, containing many seeds with hooked filaments. The root is long and large, of a firm substance, red colour, and fragrant aromatic smell, to which many spicy drugs are inferior.

It is said to be cordial and perspirative, and equally serviceable in nervous complaints and intermittent fevers, even when the bark has been unsuccessful.

Balm.

THIS plant is so common in our gardens, as to need little description. It grows to the height of eighteen inches or two feet; and the stalks are strong, square, and hairy. The leaves are oblong, broad, pointed at the ends, and notched about the edges; they stand two at each joint; the flowers, which appear in July, are small and white, but have large rough tops, which remain after the leaves which compose them are fallen. They stand in circular clusters round the stalk at the upper joints; the whole plant smells fragrantly. The root creeps and spreads exceedingly in a good soil, and somewhat shady situation.

Balm is much better fresh than dry, for it loses it's fragrancy in drying. The tea is an excellent diluting liquor, and may be drank to promote perspiration, and quench thirsts in fevers; it is also good for disorders in the head and stomach.

The Barberry Bush.

THIS shrub grows wild in some parts of England, and is common every where in gardens; it grows sometimes eight or ten feet high in an irregular manner, and much branched. The external bark is whitish, and the branches are defended by a number of prickles. The leaves are of an oval figure, and of a strong green colour, and are indented about the edges. The flowers are small and of a pale yellow; the fruit is well known, being preserved in pickle, and sent to table, both as an ornament and for use. The berries are oblong, red, and of a sour taste. The branches are brittle, and under the pale outer rind there is another of a bright yellow and much thicker. This part is used in medicine; and is strongly recommended for the jaun-

dice, in the removal of which disorder it has been often known to prove successful. It is also said to be good in all obstructions. The best way to give it is in an infusion made with boiling water.

Barley.

BARLEY is not only used in medicine, but, in some distant parts of England, bread is composed of it; and the uses made of it in the brewery and distillery are perfectly well known. It is easily distinguished from wheat as it grows, being less tall, and the leaves smaller and narrower. A long beard grows from each grain in the ear, which is composed of two rows of the grains.

This grain is used in two forms, the one called *French barley*, and the other *pearl barley*. The French barley is skinned, and the ends ground off; the pearl barley is reduced by mere grinding to a little round white lump. The pearl barley makes the finer and more elegant barley-water, but that made from the French barley is to be preferred. It is given to allay the heat of urine, and in all cases of gravel and stone; and is allowed to be a salutary liquor in most acute diseases where it is necessary to dilute. It is also in some degree nourishing.

Barren Wort.

THIS is a very pretty plant, of singular growth and appearance; it is a native of England, but not common. It grows in woods and unfrequented places, and has beautiful purple and yellow flowers; it grows a foot high; the leaves are oval and shaped like a heart, deeply indented at the edges, and of a dusky green; the stalks which produce the flowers, are weak, brittle, and usually crooked; the flowers stand in

in a kind of very loose spike, ten or a dozen upon the top; they are small, but very distinct and conspicuous; the backs of them are purple with a red edge, and the middle is yellow; the root is fibrous and creeping.

Old writers were of opinion that this plant produced no flowers; but this idea is easily accounted for: when it stands exposed to the sun, it seldom blows, as may be observed in gardens where it is planted in such situations, and where it will stand many years without flowering; but the damp and dark woods of this country favour it. Ancient botanists saw it in warm climates and an unfavourable exposure; and from this circumstance, as well as from its supposed virtues, the name is derived.

In the north of England the common people give milk, in which the roots have been boiled, to the females of the domestic animals, when they are running after the males, and imagine it has the certain effect of suppressing the natural emotions; and from hence they have been taught to give it to young women of robust habits, who are subject to violent hysteric complaints, and it is said with great success; they give the decoction of the root strong and sweetened: strange as the circumstance appears from whence it draws its medical reputation, it has been asserted to have succeeded in cases which have baffled the skill of the physician. It is said that if too large a quantity be given, it renders the patient stupid for some hours; but that no ill consequences have attended this symptom; however, we are of opinion that it should be administered with great caution, as it apparently chills the blood and impedes the circulation.

The Bay Tree.

THOUGH the bay tree is a native of Spain and Italy, where it grows to a large tree; yet it is now common in all the

gardens and plantations of England, where it rises to a very considerable height and magnitude, though not so large as to render the wood useful. The wood is not strong, but spongy and filthy, and the leaves are evergreen; the bark of the large branches is of a dusky brown, and that of the smaller reddish; the leaves are long and somewhat broad, pointed at the end, and extremely fragrant; the flowers are very small, but highly odoriferous; their colour is whitish, they appear in May, but are seldom noticed; the berries ripen towards the latter end of autumn, and are large and black, consisting of two parts within one skin.

The dried berries are the part of the tree mostly used; but the leaves also have great virtue. The berries are given in powder or infusion; in cases arising from obstructions, and in colics; they promote the discharge of urine, and the evacuation after child-birth; the leaves are given as a cordial in nervous complaints; and those who are afflicted with palsies are recommended to take small doses of them often repeated; four or five moderate doses have been known to cure agues; they are to be put into an oven as soon as they are gathered, and when they are crisp reduced to powder.

Basil.

THIS small herb is a native of warmer countries, but is now common in the gardens of England; it is bushy and branched, the stalks square, and the leaves, which are broad and short, and somewhat indented at the edge, stand two at each joint; the flowers are small and white, and shaped like those of the dead nettle; they stand on the upper part of the branches on loose spikes. The whole plant is very agreeably scented.

Basil is little used, though it is said to possess many medicinal virtues; tea made of the green plant, is prescribed as an antidote

dote and remedy against all obstructions; and some assert, that no simple is more effectual for gently promoting the female periodical discharges, and for removing those complaints which are the natural consequences of their stoppage.

There are two or three other kinds of basil, but this which we have described is the only one used in medicine.

The Bean.

THE common garden and field bean, is known to our readers of all ranks; it sometimes reaches to a yard or more in height; the stalks are angular, and the leaves are winged and stand one on each joint; the flowers are white spotted with black, and afford a delicious scent. It is unnecessary to describe the pods and seeds.

Water has been formerly distilled from bean-flowers, and used to soften the skin, but common distilled water does as well; yet a water may be drawn from the bean-pods by bruising them when the beans are half ripe in them, and distilling them with water in a common alembic, which is a very gentle carminative without any heat or acrimony, and is said to be useful for children's gripes.

Bear's Foot.

THIS is a low and singular plant, but not destitute of beauty; it is a native of several parts of Europe, but is only preserved in our gardens; the leaves are large, each rising from the root singly, on a foot-stalk about six inches long, and divided into several parts like fingers on a hand; these divisions are sometimes more and sometimes less in number; the flowers are very beautiful, being nearly as large as a common single rose; they are white, reddish, or greenish, according to the time they have been open, and stand each on a

single stalk, which rises from the root and is without leaves. It flowers in January.

The root is given as a purge, and is said to work briskly; it destroys worms, and is good in dropsies, jaundice, and other diseases occasioned by obstructions, and has been even recommended in madness; but it is necessary to be extremely careful that it is genuine, for that of the green flowered wild or bastard helebore, is commonly sold in its place, which is a very rough and somewhat dangerous medicine.

Lady's Bedstraw.

THIS wild plant is frequently found about hedges in the month of June, and the succeeding months; the stalk is weak and near two feet in height; the leaves are of a dark green and small, and the flowers are yellow; the stalk is angular and whitish, very brittle, and seldom grows straight; several leaves stand at each joint, which are small, narrow, and disposed about the stalk in a regular form like the rowels of a spur; the flowers grow in large tufts on the tops of the stalks, and they make together a very conspicuous appearance, though singly they are small.

This herb, though little regarded, is said to possess very great virtue; it should be gathered before the flowers are quite blown, and dried in the shade; an infusion of it is prescribed to stop the most violent bleedings at the nose, and almost all other hæmorrhages.

Beet.

THIS plant is common in every garden, and eaten at our tables; there are two sorts, the white and the red; the former, which is the medicinal kind, grows to the height of three or four feet. The stalk is large and strong, the leaves broad and waved

waved at the edges, the flowers of a greenish white colour, and but little observable; the root is large and long.

The juice of the fresh root is recommended as a remedy for the head-ache and tooth-ache, when it is occasioned by a cold, and the whole jaw is affected; it is directed to be snuffed up the nose, to promote sneezing.

The *red beet-root* may probably answer the same purposes, but it is not so strong as the white.

White Beben.

THIS plant grows wild in the corn-fields, and is sometimes two feet high; the stalks are weak, and of course crooked; but they are substantial enough, round, and of a greenish white colour; the leaves are oblong, broad, and of a fine blue green; they are not indented at all at the edges, and grow two at every joint; the joints of the stalk at the parts where the leaves are set on, are swelled and large, and the leaves have no stems; the flowers are white, of a moderate size and prickly; they stand upon a husk which seems to be blown up with wind.

Many virtues are attributed to this plant, and particularly in nervous cases; the root, which is long, white, and woody, is to be gathered before the stalks rise, and being dried, an infusion is to be made from it, which though it may not be powerful enough to remove a present violent disorder, is said to be an excellent preservative taken cautiously.

Bed Beben.

THIS plant grows wild about our sea-coasts, and is extremely pretty; it rises to a foot in height; the stalks are naked, and the flowers red; and, in their disposition, somewhat resemble lavender; about

the foot of the stalk stand clusters of large and broad leaves which are round at the ends thick, in substance, and the colour a deep green; these rise immediately from the root; and the stalks, which are of a pale green, and very tough and strong, and branched, grow up among the leaves: the root is long and reddish.

In some parts of England, the people cure themselves of purgings, and of overflowings of the female discharges, with an infusion of this root, and esteem it a very valuable medicine: it is to be gathered as soon as the young leaves appear, and being well cleaned, must be hung up to dry; it may be taken in powder, half a dram for a dose.

Wood Betony.

THIS herb, which possesses many virtues, is frequent on the sides of woods and among bushes and low shrubs, in the month of June; the stalks grow a foot high, and are almost naked, and the flowers are of a purple colour; many leaves rise from the root, which have long stalks, are broad and somewhat above an inch long, of a very dark green colour and hairy, blunt at the points, and indented at the edges; the stalks are square, of nearly the same colour, hairy and not very strong; they bear very few leaves, and those distant from each other; but they stand two at a joint, and are like those which spring from the root; the flowers stand at the tops of the stalks in a kind of thick short spike; they are small, of a purple colour, and shaped like the flowers of mint.

Betony should be gathered as it is ready to flower; it is esteemed serviceable in disorders of the head and all nervous complaints; and many old writers have asserted that the habitual use of it will cure the most inveterate head-aches; it is best taken as tea when it is green, or in powder when the leaves are dried; some mix it with tobacco

and smoke it; but this is a more uncertain method: the number of virtues attributed to it by the ancients, would fill a book; indeed, it is said to have been the subject of volumes.

There is another taller plant, with small purple flowers, somewhat resembling those we have described, which grows by waters and in damp places; from whence, and the shape of the leaves, it is called *water-betony*; but it does not possess any of the virtues of this plant; the last mentioned is a kind of figwort, and the virtues come nearest to those of that plant, though in an inferior degree.

The Bilberry Bush.

THIS plant is also called *bleanberry-bush*, and in the west of England the *whorleberry*; it is common in boggy woods, and upon wet or moist heaths; the stalks are tough, angular, and green; the leaves small and somewhat resembling those of the myrtle, being broad and short, but these are indented about the edges; the flowers are small, but very pretty; their colour is a faint red, and they are hollow like a cup: the berries are about the size of a large pea; they are of a black or of a very deep red, when they are ripe, and are of a very agreeable taste.

A syrup made of the juice of bilberries, when they are not too ripe, is cooling and binding, and is recommended as a pleasant and gentle medicine for women whose discharges are apt to be too redundant, to abate which it should be taken a week before the expected periodical return; this syrup is also said to be of use to stop vomiting, and restrain a bilious looseness.

The Beech Tree.

THIS tree, which grows to a very considerable size, affording a light timber, very useful for a great variety of domestic

and other purposes, is too universally known to require any particular description.

The medical purposes to which this tree has been applied are but few; the leaves are said to be cooling and binding, and have been used externally to disperse hot swellings; and the water which is found in any accidental hollows of these trees, is recommended to cleanse the skin from scurf, tetters, and other eruptions.

Bind Weed,

IS a common wild plant climbing about our hedges, and laying hold of fences, sticks, and almost every tall growing plant; it bears very large white flowers; the stalks are too weak and slender to support themselves, but they are very tough, and run to the length of six or eight feet, or even more; the leaves of this plant are large, shaped like the head of an arrow, and sharp towards the point: these leaves do not stand in pairs, but singly, and are of a pale green colour; the flowers are as broad as a crown-piece at the mouth, but grow narrower at the bases, being bell-fashioned, and perfectly white; the root is long and slender.

In some counties of England, the common people use the root of this plant as a purge; for this purpose they gather it fresh, and boil it in ale to save the expence of drugs; it is extremely nauseous, and would by no means suit a delicate stomach; but for persons of strong constitutions, it is said to be a brisk and safe purge, though the quality is by no means generally known, notwithstanding the plant is one of the most common weeds which infests the gardens and fields.

The Birch Tree.

THIS tree is common in the woods and hedges of England, but does not reach the size of the beech; the external bark is smooth and white; the young shoots are reddish,

reddish, small, and long; the leaves are very beautiful, being short, roundish, of a fine bright green, and notched at the edges; the flowers are seldom noticed, and the fruit is a little scaly globule preceding the leaves in spring.

The juice of the *birch tree*, which may be procured by boring a hole in it in the spring, acts diuretically, and is said to be good against the scurvy; the leaves, fresh gathered and boiled in water, afford a decoction which operates in the same manner, though much less powerfully, and is prescribed in dropsies; it may also be used outwardly for all disorders of the skin.

Bistort.

THIS is a most beautiful wild plant which grows in the meadows in various parts of England; and, when in flower in May and June, makes a very conspicuous, as well as very elegant appearance; it grows about a foot and a half high; the leaves are broad and beautiful, and the flowers form a thick spike or ear at the top of the stalks, and are of a bright red colour; immediately from the root rise a number of large and beautiful leaves, long, broad, and of a fine green colour; the stalks on which these leaves stand, have also a rim of the leaf running down them; the stalks themselves are round, firm, and erect, of a pale green, and have two or three leaves like those which spring from the roots but smaller, placed at distances; the spike of flowers is as long and as thick as a man's thumb; the root is thick and contorted, of a blackish appearance on the outside, and red within.

The root of the *bistort* is recommended by some botanical and medical writers, as one of the best astringents in the world, acting with certainty, but not with violence; the time of gathering it is in March, just as the leaves begin to shoot. A number of them may be strung on a line, and dried in the

shade. The powder or decoction of them is said to stop fluxes of the belly, and to be one of the safest remedies known for overflowings of the female periodical discharges. These roots are also advised as a remedy for a diabetes; and they are said to be so perfectly innocent, that the use of them may be pursued for a considerable time without danger; so that if they should prove inefficacious, they will not be injurious.

Bitter Sweet.

THE stalks of this common wild plant are weak though woody; for which reason it creeps among hedges; it bears branches of pretty flowers in summer, and these are succeeded by berries which ripen and turn red in the fall of the year; as the stalks are supported by other plants, they sometimes run to ten feet in length; they are of a bluish colour, and smell very disagreeably, and like rotten eggs, when they are bruised or broken; the leaves are oval, sharp at the points, and have each two smaller ones near the base; all the leaves are of a dusky green, indented at the edges, and growing singly on the stalks; the flowers are small, and of a fine purplish blue, with yellow threads in the middle; the berries are of an oblong shape. This herb is little regarded in medicine, though it is said not to be without virtues. The nightshades are accounted poisonous, and many of them are so; but this is by no means noxious. The wood of the larger branches, and the young shoots of the leaves, are recommended as a safe and excellent purge; and dropsies, in the early stages, are reported to have been cured by this single medicine.

Blood Wort.

THIS plant is of the dock kind, and is usually kept in gardens, though in some places it is found wild; it grows four feet

feet high; the stalks are firm, straight, and substantial, breaking into different parts, and fluted; the leaves very long, broad at the base, and growing narrow towards the extremity; some but not all are indented at the edges; they stand upon long foot-stalks, and are of a deep green colour; but they are in different degrees, some more and some less, stained with a beautiful blood red; sometimes only the ribs have the appearance, and at others there are long veins of red spreading in an irregular manner over the whole leaf; and these veins or streaks, are in some leaves very broad, and in particular instances, the whole leaves and stalks also are of the same blood colour; the flowers are very numerous, and of a small size, resembling in all respects those of the common wild docks; the root is like those also, long and thick, but of a deep red colour.

Of this plant, the roots are only used in medicine; they are best dried; and a decoction may then be made from them, or they may be given in powder: they are reputed to act powerfully as an astringent to stop bloody fluxes, the spitting of blood, and the overflowing of the female periodical discharges. This root is also recommended as a remedy for violent purgings, and for the whites in women.

Bramble.

OF all the plants of the fields and hedges, this is the most common, as it is found in every part of the kingdom; the stalks are woody, angular, and of a purplish colour, whilst they are young, but of a dark brown as they grow older; they are armed with crooked thorns, of size and strength proportioned to the age of the shoot on which they grow; the leaves are rough, indented, and stand either five or three on a stalk; the flowers are white, with a very faint tinge of purple at their

first opening; and the fruit is composed of a number of small grains, which first turn red, and when they are perfectly ripe, black.

Little as this very common plant is regarded, it has it's uses in medicine: the buds of the *bramble-leaves*, boiled in spring water, and the decoction sweetened with honey, are prescribed with success for sore throats; the juice of the unripe fruit made into a syrup, with very fine sugar, is cooling and astringent, and is recommended in immoderate fluxes of the female discharges, and even in violent loosenesses; but when the berries are to be used for this purpose, they are to be gathered whilst they are red.

Blue Bottle.

THIS plant is also universally known, growing generally among corn: the leaves are narrow, and of a whitish green; the flowers of a very beautiful blue, and rather large. This plant seldom grows much above a foot high, and when there are many of them in a field, they make an elegant appearance in flower; the root is hard and somewhat fibrous; the stalk is strong, white, angular, and branched or divided; those leaves which grow from the root are notched at the edges, but not those on the stalks, but both are narrow-like blades of grass; the flowers stand only on the tops of the branches, and grow out of a scaly head; the seeds are beautiful, being hard, of a white colour, and shining as if they were polished.

Different parts of this plant may be used medicinally.

Those leaves which grow on the stalks, fresh gathered and bruised, are said to be so efficacious in stopping the bleeding of fresh wounds, that even if a large vessel be cut, they will effectually answer this purpose; and may even save a life in case of such accidents, where a surgeon is not to be had in

in time: a distilled water of the flowers was formerly kept in the shops, but it was good for nothing; an infusion of these is said to be diuretic.

A larger kind of this plant is preserved in gardens, and this has been esteemed a vulnerary or wound herb, but does not appear to possess the virtues of the wild sort.

The Box Tree.

THIS shrub is a native of Great Britain; a spot in the county of Surry, not much above twenty miles from London, deriving it's name from it; it sometimes grows to a height and size above most other shrubs, but is generally kept low in gardens, where it usually serves to border parterres; the bark is of a very light ash colour, nearly white; the wood of a faint yellow; the leaves small, round, smooth, of a very dark green colour, and extremely numerous; the flowers are very inconsiderable, and of a greenish yellow; the fruit is small and round, but has three angular points.

The wood of the *box-tree*, and particularly that of the root, is said to possess the same virtues as the *guaiacum*, but in a greater degree, and is prescribed to persons whose blood is foul; it may be administered in decoction, which should not however be made too strong, but ought to be continued a long time; instances have been known where leprosy and similar disorders of the skin have been entirely cured by this medicine; an oil extracted from it by distillation, is good for the tooth-ache, dropped on cotton, and put into the tooth.

Borage.

THIS is a rough plant very common in gardens, having large leaves, and handsome blue flowers; it grows to the height

of two feet; the stalks are thick, full of juice, round, fleshy, and covered thickly with a kind of hairs, each of which is so strong as to act like a prickle; the leaves, which are oblong, broad, and somewhat wrinkled, have nearly the same sort of hairs, but these are less than those of the stalk; the leaves which grow from the root are the largest, but those on the stalks are of nearly the same shape; the flowers rise from the tops of the branches; each of these is divided into five parts, of a most beautiful blue, with a black spot or eye in the middle.

This plant is reputed to possess cordial qualities; but they are to be obtained only by a light cold infusion, which is the reason that it is commonly thrown into cold negus or wine and water, to compose a summer drink; in all medicinal preparations it is nauseous and of little use.

White Briony.

THIS wild plant grows extremely tall, and climbs about our hedges, which in many places it almost covers; the leaves resemble in some measure those of the vine; the flowers are scarce worth notice, but they are succeeded by red berries, which make a pleasing appearance; the root grows to a large size, and is rough and whitish; the stalks are slender but tough, grow to ten or twelve feet in length, but are weak and unable to support themselves; at each joint they have tendrils, which lay hold on any tree or bush; the leaves are broad, and have deep divisions at the edges, and are hairy; the berries are of a moderate size, and full of seeds.

The part used in medicine is principally the root, the juice of which operates strongly both by vomit and stool, and that when taken in such small doses, that it should be administered with great caution,

tion, and especially to persons of weak constitutions; but for those that can bear it, it is said to be excellent in many severe diseases, and in particular dropfies; it is also prescribed against hysteric complaints, but for this purpose, the doses must be so small as to produce little or no sensible effect, and these should be frequently repeated.

Black Briony.

THE virtues of this plant are little known or heard of, though it is said to possess many; it climbs upon bushes and hedges like that last described; but this twists it's stalks about the branches of trees and shrubs, being without tendrils, and in this way it will sometimes rise to fifteen feet in height; the stalk is tough and angular, the leaves broad and shaped like a heart; they are perfectly smooth and shining, and of a glossy but very deep green, almost inclinable to black; the flowers are very small, and of a greenish white; the berries which succeed them are red; the root has a kind of black bark, but is white within; and it is full of juice of a slimy consistence.

This root is said to be an admirable diuretic, and an excellent remedy in the gravel, and all other obstructions of urine arising from disorders in the urinary passages.

Brook Lime.

THIS herb is to be found about almost all shallow waters; it has a thick stalk, roundish leaves, and little bright blue flowers which grow on spikes; *brook-lime* rises to the height of a foot; the stalk is round, juicy, and of considerable size, notwithstanding which it seldom grows upright; it strikes root at any of the lower joints; the leaves are rather broad, oblong, blunt at the end, and somewhat indented at the edges; the flowers, which stand sing-

ly on short foot-stalks one over another, form a kind of loose spike, the roots, like those of other aquatic plants of the same tribe, are fibrous.

Many virtues are ascribed to brook-lime, but it must be used fresh-gathered, for all the efficacy is lost by drying; the juice, taken in the spring of the year, is very serviceable to persons who have scorbutic habits, but it must be taken for some time; it operates by urine, but the greater part of it's virtues are of the alterative kind, for it sweetens the blood, and purges it of foul humours.

Broom.

THIS shrub is well known, growing on waste grounds, on stony and light soils, in most parts of England; it bears yellow flowers in the month of May, and rises in situations which agree with it to the height of three, four, or even five feet; the stalks are strong, angular, and of a dark green colour; the leaves are but few, and these are also small and grow together, standing at distances on the long and tender stalks; the flowers, which are numerous, are shaped exactly like a pea-blossom, and are of a very beautiful bright yellow; these flowers are succeeded by pods which are flat and covered with hair.

The stalks of this plant, whilst they are green, are infused in ale or beer for a common drink, in which they are thought to operate by urine, in the removal of obstructions of the liver and other intestines; it is also celebrated for the cure of the dropsy and jaundice.

These green stalks are also sometimes burnt to ashes, and those ashes being infused in white wine, the fixed salt is extracted, and the wine is strongly impregnated with it; this preparation also works by urine, but more powerfully than the former, which however is to be preferred for removing obstructions.

Buck-

Buck-Beans, or Buck-Bane.

THIS herb is universally known to the common people in every part of Great Britain, and is said to possess great virtue. It grows wild in marshy places, and its appearance is so remarkable that it cannot be mistaken; it grows to the height of a foot, with three leaves upon each stalk, and these stalks spring immediately from the roots, and are round, stout, smooth, and juicy; the leaves themselves are large, of an oblong shape, resembling in some measure those of garden beans; the flowers stand upon stems without leaves which answer the description of the other stalks; they are small, but growing together in a large but short spike, and being of a white colour tinged with purple, they make a conspicuous appearance in the cluster; these flowers are hairy within, the root is long and substantial, and when broken appears white.

The leaves of *Buck-bean*, gathered before the flower stalks appear, and dried, are said to be of use in the cure of agues, being administered in powder; but they are principally recommended for the rheumatism; and for this disorder they are to be given for a considerable length of time, either in infusion or as a tea.

Buckhorn.

THIS shrub is common in our hedges, bearing pale green leaves, and black berries; it is a large plant, sometimes growing eight or ten feet high; the bark is dark coloured and smooth, and the twigs are strong and tough; the whole body, branches and twigs, are full of sharp prickles; the leaves are oval, of a very regular and pleasing form, and neatly indented round the edges; the flowers are small, and without

beauty, being of a greenish yellow, and growing in little clusters; the berries are round, shining, and in September when they ripen, turn black, and are then as big as the largest pepper-corns, and contain each three or four seeds.

A syrup made of the juice of these berries boiled with sugar, is a powerful purge; but it is apt to gripe, unless some spice be added to it: though a somewhat rough medicine, it is a safe and very good one.

Buckhorn Plantain.

THIS is a small but pretty plant, which grows commonly in sandy and barren places; the leaves spread round from the root in the manner of a star; the heads are like other plantains, though not at all resembling it in the leaves; the root is long, but slender; the leaves lying flat upon the ground, are narrow and long, but beautifully notched and divided, so as to be somewhat like a buck's horn; from which circumstances it derives its name. These leaves are of a pale green, inclined to white, and somewhat hairy; the stalks are slender, seldom rise to the height of six inches, nor though so short are they altogether erect; they are round, hairy, and nearly of the colour of the leaves; they bear at the top a spike of flowers from one inch to two in length, in all respects like the common plantains, only somewhat more slender.

This plant is also sometimes called the star of the earth, from the figure in which the leaves extend themselves. These leaves were formerly directed to be bruised and applied to fresh wounds to stop the bleeding, and heal them; but they are not at present in much reputation, either for this use, or to cure the bite of a mad dog, for which they were once celebrated, though it is apprehended without foundation.

Bugle.

Bugle.

THIS is also a common wild plant, of a very pleasing growth and figure; the stalks are creeping, and bear glossy leaves and blue flowers; it is found in damp woods; when the stalks are erected to bear the flowers, they rise to eight or ten inches high, are square, and of a pale green colour, though sometimes inclining to purplish, and have two leaves at each joint, the joints being at some distance; these leaves are of the same form with those which spring directly from the root, being of an oblong shape, broad, the points roundish, and generally of a deep green colour, though these are sometimes also a little purplish, and slightly indented round the edges: the colour of the flowers is beautiful, though they are but small; their shape is like those of betony; and they grow in a sort of circles round the upper part of the stalks, forming loose spikes; the caps remain, and hold the seeds when the flowers wither.

The leaves of this plant are applied to various medicinal uses; the juice of them is esteemed good for inward bruises; and tea made from them is a very good diuretic.

Bugloss.

THIS plant is kept in our gardens on account of it's medicinal virtues, but it is very seldom used; it has but little beauty to recommend it, being a coarse rough herb, grows a foot or eighteen inches high; the leaves are like those of borage, but they are longer and narrower, and of a deeper green colour; the stalks are also covered with a rough and prickly hairiness, like those of borage; and on these stand leaves of the same sort as those which rise immediately from the root, but smaller; the flowers stand on the tops of the branch-

es, and though not very large, make a pretty appearance; they are red when the bud first begins to disclose them, but they afterwards change to blue; the flowers appear in June and July; and the root is long, covered with a brown bark or skin.

Bugloss as well as borage, is esteemed a cordial; and perhaps, with equal justice; it is used also for the same purposes; and if it possesses any virtues, they are of the same kind: these plants also grow wild upon the banks of ditches in some parts of England.

Burdock.

THE common *burdock* is so universally known, that it is hardly necessary to describe it; it grows a yard or more high, and has leaves of an almost triangular figure, and of a pale green colour, with a whitish cast; the stalks are round, ribbed, and very strong; the flowers small, of a red colour, and growing among the hooked prickles of those heads which are commonly called burs, and which stick to the cloaths; from this circumstance it takes it's name; and as these heads, by this tenacious faculty, lay hold of the fleeces of the sheep and the garments of mankind, so in pulling them off from the plant, the seeds are scattered, which might otherwise rot in this substantial pod: the root of the burdock is long and large, covered with a brown bark on the outside, and white within; it is the root which is used medicinally, and many and great virtues have been attributed to it; it may be boiled or infused in water, and the infusion or decoction of it is very powerfully diuretic; and it is said to have cured dropsies without any other assistance; the seeds possess the same virtue, but not in an equal degree; the root is reputed to have a perspirative quality, and to be useful in fevers; but it's operation by urine in removing obstructions, seems to be the most valuable of it's properties.

Burr Reed.

Burr-Reed.

THIS common water plant has leaves like flags, and rough heads which contain the seeds; it grows two or three feet high; the stalks are round, strong, upright, and of a green colour; the leaves, which are long and narrow, are sharp at the edges, and have a prominent acute ridge along the middle of the back; they are of a pale green colour, and a fresh and pleasing appearance; the flowers are yellowish and make an indifferent figure; they stand in circular tufts about the higher parts of the stalk; lower down stand the rough seed-pods, which are commonly called *burrs*, from whence the plant derived it's name; these grow to the bigness of a large nutmeg, and are rough and of a green colour; the root is made up of a quantity of fibres.

The unripe pods or fruit are used in medicine; they are said to be of an astringent quality, and to have been used with success in fluxes of the belly, and all kinds of internal hæmorrhages; they may be infused in Port wine, with a little cinnamon: in some parts of England the juice is expressed and reported to be applied to fresh hurts with great success; old ulcers and other wounds of long standing are also washed with a strong decoction of the pods, which is said to cleanse them and contribute to correct the acid humour.

Burnet.

THIS pretty wild plant grows in pasture lands, by way-sides and in dry places, and flowers in July; it has been of late years cultivated as an artificial grass, and is said to produce good fodder; those leaves which rise immediately from the root, are extremely beautiful; they are of the winged

kind, and are composed of a great number of small leaves, growing on each side a middle rib, and terminating in a single one; they are broad, round, and short, but elegantly notched at the edges; the stalks rise to the height of twelve or fourteen inches, and are round and ribbed, of a purplish or green colour, and very bare of leaves, the few they have being, however, like those which spring from the root; on the tops of these stalks stand the flowers, which are disposed in small round clusters, being inconsiderable in size, and of a pale colour; they have a number of filaments in the middle.

Burnet is said to be a cordial and perspirative, and is prescribed in fevers; it is also used in summer drinks with borage; the root is astringent; and dried and powdered, is reputed to stop fluxes, and restrain the overflowing of the monthly discharges of females.

Burnet Saxifrage.

THOUGH not so common as the last mentioned, this herb is also found wild in some dry pastures and under hedges, in different parts of the kingdom; it sometimes reaches the height of two feet and has the flowers in dropping bunches; the stalk is strong, ribbed, and branched; the leaves rising from the root are winged, and the small leaves of which they are composed are of a deep green, narrow, and indented; the leaves which grow upon the stalks are still smaller and narrower: though the flowers are of inconsiderable size, and white, yet, standing in large clusters, they make a figure; the root is white within, and of a hot and acrid taste, and this is the only part used, which should be taken up and dried early in spring, before the stalks shoot; it is recommended in colics and for disorders of the stomach, and operates chiefly by urine.

Butcher's Broom.

THIS plant, or rather shrub, is common in waste grounds and upon open heaths; it has small prickly leaves and a bushy top, and seldom grows above eighteen inches high; the stalks are round, substantial, fluted, and very tough; they are without leaves toward the bottom, and divided into different branches toward the top, where they are covered with short, broad, oval, but pointed leaves, the point ending in a prickle; these leaves are of a bluish green in colour, very fleshy and full of juice; the flowers are scarce discoverable, for they grow in a very extraordinary manner upon the backs of the leaves, and are very small but of a purple colour; the flowers are each succeeded by a single berry, which is round, of the size of a pea, and grows red as it ripens; the roots are numerous, thick, and white; and this root is the part used in medicine to remove obstructions, to which end it is said to work powerfully by urine, and to be efficacious in jaundices, in stoppages of the monthly discharges, and in gravel, stone, and other disorders which occasion retention or suppression of urine.

Butter Bur.

THIS plant grows generally in wet places, where it makes no inconsiderable figure; the flowers appear before the leaves, which hardly seem to belong to the same plant; the stalks are juicy, round, strong, and of a whitish colour, without leaves, the places of which are supplied by a kind of film; on the top of each stalk stands a spike of flowers, which are of a light red colour; the height of the whole seldom exceeds eight inches; the flowers appear very early in the spring, and when they die, the leaves grow up; these are

round, green on the upper side, and whitish beneath, of vast size, sometimes reaching to twelve feet in breadth, and stand singly upon hollow foot-stalks, of a purplish white or green colour; the root is white and long, creeping just under the surface of the ground.

This root is medicinally used; it is highly spoken of as a remedy in pestilential fevers and other contagious disorders, being said to excite perspiration; it is also prescribed as a cordial to prevent hysterical faintings, and it is a good diuretic, and excellent in the gravel; the powder of the dried root may be taken, or an infusion or decoction may be made of the root bruised or sliced.

Calamint.

THIS herb is frequently found wild in hedges and other dry places, and is said to possess many virtues. It grows only eight or ten inches high, has round dark green leaves, and bears white flowers; the stalks are square and much branched; the leaves are about the bigness of the nail of the thumb, somewhat hairy, and slightly indented at the edges; the flowers, which are of a whitish colour tinged with purple, stand in clusters surrounding the stalks; the root consists of a few fibres. This herb must be gathered just as it is about to flower, and carefully dried; it may afterwards be given in the manner of tea, in which form it is recommended in weaknesses of the stomach, and habitual colics, but must be persevered in for a considerable length of time, in order to effect a lasting change in the constitution: this whole plant is strongly and agreeably scented.

Pennyroyal Calamint.

THIS little plant is nearly of the same kind as the last-mentioned, and is found in much the same places; but it is rather

rather more common; it rises a foot high; the stalks are strong and firm; the leaves small and of a green colour, inclinable to white, and more hairy than the other calamint: the flowers of this are small and white, tinged also with purple; the plant is more erect and less branched than the other, and has a very strong but by no means pleasant smell.

If this plant is preserved dry as the other, and administered in the same manner, it is reported to be a good remedy for stoppages and obstructions of the monthly discharges; and if taken for a considerable length of time, and repeated at proper periods, to bring them to a regular course.

Calves Snout, or Snap Dragon.

THIS plant, which grows wild in many other parts of Europe, is commonly found in our gardens and on garden walls; where it is wild, it's natural situation is on hilly, barren, and rocky grounds, for which reason the top of an old wall with us seems to agree with it; the seeds being light, are easily carried thither by the wind, where it always strikes and the plant flourishes; it grows two feet high, the stalks are round, strong, tough, but not quite upright, generally bending a little towards the bottom; the leaves, which are very numerous, are of an oblong shape, narrow, plain at the edges, round at the ends, and of a blue green colour; the flowers are large, and of a good red; they grow in a kind of loose spikes at the tops of the stalks; the root is of an oblong form, and white when broken or cut.

In medicine only the fresh tops are used, an infusion of which operates by urine, and has been recommended in the jaundice, and in other diseases arising from obstructions in the intestinal parts; but many English plants excel in this particular, and the taste of the infusion being by no means palat-

able, it is hardly worth while to make use of it.

Camomile.

THIS plant is universally known, growing wild in every quarter of the kingdom; it is of a beautiful green colour, emits a fragrant smell, and bears flowers resembling daisies; it is commonly found on damp heaths, and is not improved by being brought into gardens; it grows larger there, but has less efficacy. *Camomile* spreads it's branches upon the ground, taking root at the joints; the stalks are round, of a full green, and substantial; the leaves are very finely divided, and of a dark green colour, almost approaching to black; the flowers grow upon long foot-stalks, white at the edges, and yellow in the middle, and these are principally used for medicinal purposes; the double sort, which is commonly cultivated in gardens for sale, have very little virtue in comparison of the single ones. Taken in tea they afford a pleasant and grateful bitter, and are excellent for disorders of the stomach; or they may be given dried and powdered, and in this way they have sometimes cured agues, a disorder which is frequently removed by bitters; the tea made of them is also good in the colic, working by urine; the flowers dried and powdered and mingled with rhubarb in the same state, compose those stomach pills which have been celebrated under the name of Speediman's; a decoction of the dried flowers is also an excellent fomentation in violent bruises, the hot flannels as they are wrung out of it, being sprinkled with camphorated spirits of wine.

White Campion.

THIS plant grows wild in hedges and dry pastures, having hairy leaves and white flowers; it rises to the height of a foot

foot or eighteen inches; the stalks are round and hairy, the leaves of an oval figure and also hairy, growing two at every joint; the colour of the leaves is a dusky green, and the edges are plain; the flowers are white and of a moderate size, they grow in small clusters at the top of the branches, each having a separate foot-stalk.

This plant seems not so much regarded for it's virtues, as it deserves; the country people in some parts of England gather the flowers and give a strong decoction of them in the whites, and other weakneses of the like kind, with success.

Canterbury Bells.

THIS beautiful wild plant grows plentifully by the sides of roads, in dry pastures, and undisturbed grounds; the leaves are like those of the stinging-nettle; the flowers are large, handsome, and of an elegant blue colour; it sometimes grows two or three feet high; the stalks are square, substantial, straight, strong, and covered with hairs; the leaves do not grow with any regularity, they are of a dusky green, standing upon long foot-stalks, and are broad at the bases and sharp towards the points, and the edges neatly and sharply indented; the leaves also are hairy and feel rough to the touch; at the top of every branch grow the flowers, ten or a dozen together; they are hollow and divided into several parts at the edge or extremity; the flowers sometimes vary in their colour, being either pale blue, reddish, or white, according to the difference of the soil and situation, but the plant is the same.

The parts of this plant which are chiefly used as medicines, are the fresh tops with the buds of the flowers upon them; these contain most of the virtues, but the dried leaves are sometimes used; an infusion of either, sharpened with a few drops of spirit of vitriol, and sweetened with honey, may

be used with success as a gargle for a sore throat; and from this virtue one of the common English names of this plant is *throat-wort*; used in this way it is so innocent, that if it should be swallowed accidentally it will not prove injurious, though in all such cases it is proper to spit the liquor out carefully, because if it be suffered to go down, it will carry with it the foulness which it may have washed from the affected parts.

Caper Shrub.

THOUGH this shrub is not a native of this country but of France and Italy, yet as it is kept in our gardens it may not be improper to mention it. The pickles which are sold under the name of *capers* are the unblown buds of the flowers; the part to be used in medicine is the bark of the roots.

This shrub does not rise to any great height; and the branches are weak and scarce able to support themselves, they are tough and armed with sharp thorns or prickles; the leaves are not placed in any regular form, they are of an oval or round shape, and the thorns are hooked like those of the bramble; the flowers when they expand are a kind of purple, and make a very pretty appearance; the fruit is roundish.

The bark of the root taken in powder or infusion, is said to be a remedy for obstructions of the intestinal parts, the liver and spleen, in particular; it is also reported to be efficacious in removing the jaundice and hypocondriac complaints; and it is recommended to assist digestion.

Caraway Plant.

THIS plant grows wild in some parts of England, and particularly in Lincolnshire; it is cultivated in Germany for the seed.

It

It grows to the height of a yard; the stalks are ribbed and firm, the leaves divided into very fine parts, and the flowers white and small, but they grow in tufts or umbels on the tops of the branches; the seeds which succeed them are too well known to require any description; if these seeds are chewed they afford relief in the colic and in disorders of the stomach. The root was formerly eaten; being boiled tender, it is said to be as agreeable as the parsnip; the root also yields an oil which used to be taken on sugar, five or six drops as a dose, for pains of the belly, especially those of the flatulent kind.

Carline Thistle.

THE leaves of this plant rise from the root without any stalk; they are long, narrow, of a darkish green colour, divided, and prickly at the edges; they spread themselves upon the ground in form of a star; in the midst of these leaves, the flower also appears without a stalk, springing immediately from the root, with several small leaves round it; it has the head of a thistle; and the flowery part is white on the edges, and yellow in the middle; the root is long, brown on the outside, and of a reddish colour within; the taste of it is warm and aromatic.

The root only of this plant is used in medicine, and is reported to be a remedy for the plague; it is also recommended in nervous complaints, and in stoppages of the periodical discharges.

Wild Carrot.

THIS plant grows wild about hedges, in dry pastures, near farm yards, and in other places not usually turned up; it sometimes rises near a yard high, bearing small flowers, and after them rough seeds,

disposed in tufts at the tops of the branches; these are concave, and of a regular form.

The stalks are ribbed and firm; the leaves divided into numerous partitions, of a pale green, and somewhat hairy; the flowers are white.

The seed is the only part used in medicine, and allowed to be a very good diuretic; and to be servicable in all such complaints as are occasioned by the gravel and stone, and all obstructions of urine; it is also good in stoppages of the periodical discharges; and the best way of taking it, is to infuse a large handful of the seed in ten gallons of ale, and take it as a common drink.

Cat Mint.

FEW plants are more common than this about the hedges in most parts of England; it grows a yard high; the stalks are square, of a whitish green colour, hairy, and upright; the leaves stand two at a joint, broad at the base, and terminating in an obtuse end; they are lightly indented at the edges, and are of the same colour as the stalks on the upper side, and very white underneath; the flowers are small and white, growing in spiked clusters, and surrounding the stalks at certain distances. The whole plant has a very strong, and somewhat disagreeable smell.

Cat mint is to be gathered at the time it is just getting into bloom, and dried. It is particularly recommended in female disorders, against hysteric complaints, vapours, and fainting fits; it moderately promotes the periodical discharges and necessary evacuations after delivery. In all cases, the best way to administer it, is in an infusion.

Great Celandine.

THIS plant also grows wild, and has large leaves and yellow flowers; and when broken in any part of the stalk or leaves,

leaves, emits a yellow juice; it sometimes rises three feet high, but the stalks are not very stout; they are round, green, and rather naked, with thick joints; the leaves, which stand two at each joint, are large, long, and very deeply divided at the edges, and the colour of them is a yellowish green. The flowers are small, but of a beautiful yellow, and stand on long foot-stalks, many together.

Celandine must be used green, losing the greatest part of it's virtues by drying; the juice is the best way of giving it; and this medicine is highly extolled in the jaundice, and all obstructions of the internal parts; and if persevered in a sufficient time, will be found servicable in the scurvy; the juice also is used successfully for sore eyes; and warts are removed by it.

Little Celandine.

THIS plant differs so totally from that last described, that it is somewhat surprising how it could obtain the same name. The only circumstance in which they resemble each other is, that they have both yellow flowers. The great celandine approaches nearest to the poppy tribe; the small, to that of the crow-foot; and their virtues are as distinct as their forms.

Little Celandine seldom grows to any considerable height, but seen almost every where in damp places in the spring of the year; it has broad leaves of a deep green, and glossy yellow flowers. The leaves are not above an inch long, and nearly the same breadth, resembling somewhat those of the garden hepatica, and are frequently spotted; they rise singly from the root, on long and small stalks, destitute of leaves; the flowers also rise from the root on stalks of the same description, and are as broad as a shilling, of a fine shining yellow colour, and composed of many leaves; the root has small white tuberous lumps connected together by many fibrous strings.

The roots are strongly recommended to prevent and cure the piles; and to this end the juice of them is to be taken inwardly; some people make a cooling ointment of the leaves, which they chop in pieces, and boil them in lard till they are crisp, then strain off the lard, which by this process takes a fine green colour. The root operates chiefly by urine, but in no very great degree.

Little Centuary.

THIS plant grows wild in dry places in many parts of England; it is seldom above eight or ten inches high; the leaves are of an oblong shape, broad, and blunt at the points; the stalks are strong and erect; and the flowers of a fine tender red; a cluster of leaves an inch or more long, grows immediately from the root; the stalks are divided into several branches towards the top; the flowers are long and slender, and stand in clusters.

An infusion of the leaves and stalks of this plant is said to be an excellent stomachic; the taste is a pleasant bitter; it is recommended to strengthen the stomach, and excite an appetite; and is reputed to be powerful in removing obstructions of the liver and spleen; on which account it is commonly prescribed in jaundices; and dried and powdered, it has also been long celebrated among country people for the cure of agues, in common with other bitters; it is also said to be useful applied to green wounds; and a decoction of it efficacious in cleansing ulcers.

There is also a greater *centuary*; but it is not a native of Great Britain, nor used by us in medicine.

Chaste Tree.

THOUGH this little shrub is a native of Italy, yet it is common in our gardens; it seldom exceeds five or six feet in height;

height; the body is rough, but the branches which are smooth, tough, of considerable length, and of a grey colour, spread like the fingers of a human hand, and when they are opened, five, six, or seven of these divisions stand on each stalk; these leaves are of a deep green above, and of a more light, nearly white beneath; the flowers are small, of a pale reddish cast, and stand in long loose spikes; the fruit which succeeds these flowers, is about the size of a pepper-corn.

This shrub is but little used as a medicine. A decoction of the leaves and tops, is said to remove obstructions of the liver and other intestines.

Black Cherry Tree.

THIS tree is universally known; it grows to a considerable height, and is well shaped; the leaves are broad, round, but sharp at the points, and indented round the edges; the blossoms are white, and the fruit black when it is ripe. The medicinal part is the kernel within the stone; and we mention it merely to obviate vulgar errors concerning it: these kernels having been constantly belived to be an antidote against apoplexies, palsies, and nervous diseases, a water distilled from them, was universally used as a remedy for convulsion, and other fits in children; but from modern experience, it is highly probable, that this water occasioned the very disorders it was given to remove. Laurel water, when made of great strength, has been on a late melancholy occasion proved to be sudden poison; and when weak, it tastes like black cherry-water, but is not then totally pernicious: in like manner, the black cherry-water which used to be given to children, weak drawn, has been found to have poisonous qualities, when it's strength has been considerably increased; is it not therefore natural to suppose, that in any degree of strength, it may do mischief; and may not

the deaths of great numbers of children be attributed to the universal prescription of this medicine for more than half their disorders.

The gum which works out upon the bodies and branches of cherry trees, is of the same nature with gum arabic, and may be used in the many cases wherein the last-mentioned gum is directed to be taken.

Winter Cherry.

THIS is a handsome plant; and though not a native of this country, is commonly kept in our gardens; it grows two feet high, not very straight, nor much branched; the stalks are substantial, strong, and angular; the leaves large and broad, with sharp points; the flowers are of moderate size, and white, but have yellow threads in the middle: the first which succeeds the flower, is a round red berry as big as a common red cherry; and this berry is contained in a green round hollow husk, of the size and figure of a walnut.

These berries are the part used in medicines; they must be separated from the husks and dried, and are then to be given in powder or decoction in stranguries, retention suppression or heat of urine, in the gravel and stone; they are also prescribed in jaundices, dropfies, and such other disorders as proceed from obstructions, but their efficacy is not so great as to entitle them to much confidence unaccompanied by other medicines.

Chervil.

THIS is a fallad herb very commonly cultivated in gardens, but not destitute of medical virtue; its manner of growth is like parsley, only that the leaves are more divided and of a paler colour, inclining to yellow; the stalks are round, ribbed, hollow

low, and of the same colour as the leaves; they divide into several branches, and grow to about the height of two feet; the leaves on the stalks resemble those from the root, but are smaller; the flowers are white, and stand in large clusters at the tops of the branches; the seeds are large and smooth, the flowers have a bitter taste.

The roots of *chervil* are prescribed in all cases where the urine is retained or suppressed, though their operation is by no means powerful; a decoction should be made of them.

The Chestnut Tree.

THIS tree is well known; it is large, spreading, and of handsome growth; the bark is smooth and of a grey colour; the leaves long, and of proportionable breadth, deep and elegantly indented round the edges; they are of a lively but strong green; the flowers are a kind of catkins, resembling those of willows, long and slender, and of a colour inclining to yellow; the fruits are covered with a rough shell armed all over with prickles; and under that each particular nut is covered with a firm smooth, and polished brown coat, and within that a thin skin, of an austere taste, immediately over the kernel.

This thin skin last mentioned, is the only part used in medicine; it must be separated from the chestnut, before it is too ripe, and dried; and it then becomes a very good astringent, and stops purgings and overflowings of the periodical discharges.

Earth Chestnut, or Earth Nut.

THIS plant takes its name from its root, which is of the bigness of a small chestnut, roundish, brown on the outside, and white within, and of a sweetish taste: the plant rises a foot high, but seldom high-

er; the leaves are divided into fine and numerous partitions; the stalk is upright, strong, round, and green; the flowers white and small, but they grow in large tufts on the tops of the branches.

The root, roasted in the manner of a chestnut, and eaten, is said to have great virtues as a strengthener, but it is to be doubted if it possesses any medicinal quality.

Chick Weed.

THERE are several sorts of this very common weed, some of which are said to possess many medicinal virtues; that which is most efficacious in medicine is the plant which grows so plentifully in every garden; it is low and much branched; the stalks are round, green, brittle, and divided; they commonly lean to the ground; the leaves are short and broad, thick and juicy, of a chearful green, not indented at the edges, they grow two at every joint; the flowers are very small and white.

The leaves and stalks of this plant, cut to pieces and boiled in lard till they are crisp, become a cooling ointment, of a fine green colour, and the juice is directed to be taken inwardly for the scurvy; and in decoction it is prescribed for hectic heats, consumptions, and internal inflammations; it was anciently used in all cases of extraordinary heat both internally and externally.

Chick.

THIS is a plant of the pea kind, and sown in some places for the produce as pease; the plant is low and much branched; the stalks round, brittle, weak, and hairy, of a pale green colour; the leaves are like those of the pea, but each distinct leaf narrower and of a paler green, and somewhat hairy like the stalk; the flowers are small and white, and in form resemble the

the blossoms of pease; the pods are short, thick, and hairy, seldom containing more than two and often only one seed in each. They are eaten in some places, and as a medicine they operate as a mild diuretic.

Cinque Foin.

THIS plant creeps wild about way sides, and in old pastures and other undisturbed places; the stalks are round, smooth, and commonly of a reddish colour, they lie upon the ground, taking root at the joints; the leaves stand on long foot-stalks, five on a stalk; these leaves are about an inch long but narrow, of a deep dusky green colour, and somewhat indented at the edges; the flowers are also supported by long foot-stalks; they are yellow and about the size of a shilling, and the colour of them extremely bright and pleasing; it has a large and long root covered with a brown bark but whitish within.

The bark of the root only is used in medicine; it should be dug up in April, taken off and dried. Being reduced to powder, it is given as a remedy for all sorts of fluxes; it stops purgings, and the overflows of the female discharges, and that more effectually than most other medicines.

Clary.

THIS plant is commonly kept in our gardens, not in honour of it's beauty but of its virtues; it grows from two feet to two feet and a half high; the leaves are rough, and the flowers of a faint blue; the stalks are thick, juicy, and upright, clammy to the touch, and somewhat hairy; the leaves are large, wrinkled, and of a dusky green, broad at the base, and growing narrow towards the point, which is obtuse; the

flowers grow in long loose spikes, and are disposed in circles round the upper parts of the stalks; they are large and gaping, and the cups in which they stand are stout and a little prickly.

The whole herb, fresh or dried, is esteemed medicinal, being cordial and mildly astringent. It has the reputation of strengthening the stomach, relieving head-aches, and stopping those discharges which are occasioned by weakness; but for this last purpose, it is necessary to continue the use of it a very considerable length of time; and as there are many remedies more powerful, it is at present much disused. A mucilage was formerly made from the seeds, and applied to dissolve and disperse swellings; and an idle notion prevailed that this preparation assisted in drawing out thorns and splinters from the flesh.

A kind of wild clary grows on our ditch banks and in dry grounds, which probably possesses the same virtues with that we have just described; the seeds of this are commonly put into the eyes to take out any little offensive substance which happens to get into them; as soon as they are put in, they gather a coat of mucilage about them which catches hold of any foreign matter which it meets with in the eye, and both the seed and that are taken out together.

Country housewives make a wine in which this plant being an ingredient, it bears the name of it; but however this might be formerly admired, it is not at present in much esteem.

Cleavers, or Clivers.

THIS herb grows in almost every hedge, and is universally known by sticking to people's cloaths as they touch it; the stalks are square and very rough, run two feet long, but are so weak, brittle, and unable to support themselves, that they climb
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among bushes and other plants; the leaves are long and narrow, of a pale green, growing several at every joint, and surrounding the stalk in the manner of a spur-rowel; the leaves are rough as the stalk, sticking to every thing they touch; the flowers are small and white; the seeds grow two together, are round, and resemble the rest of the plant in roughness; the root is fibrous.

The juice of the fresh herb is said to operate by urine, in cooling the body, and to be good against the scurvy and other external disorders; it was formerly esteemed a cure for the king's evil; but it has been long known to be inefficacious in the removal of that inveterate disease.

Clove July Flower.

THIS very beautiful flower is common in most gardens; and has obtained its name from the aromatic smell, which resembles the clove spice, and from its flowering in the month of July; this carnation is only of one colour, a deep and fine crimson or purple; the plant grows to the height of two feet; the leaves, like other pinks and carnations, are grassy; the stalks round and jointed; the flower grows at the extremities of the branches, and the colour of the whole plant is a bluish green.

The flowers are esteemed cordial, and serviceable in disorders of the head; they are dried and taken in powder, or in the form of tea, but the best preparation is the syrup. This is made by pouring five half pints of boiling water upon one pound and a half of the flowers picked from the husks, and with the white parts cut off, after they have infused twelve hours, straining off the clear liquor, without pressing the flowers, and dissolving in it five pounds of the finest sugar; this makes a most elegant and agreeable syrup.

Cockle.

THIS is a tall, erect, and beautiful plant, which grows wild in corn-fields, with red flowers and narrow leaves; it is two feet high, the stalk single, round, hairy, and, though slender, very firm and perfectly upright; the leaves, which are not very numerous, stand two at a joint; they are long and narrow, somewhat hairy, and of a bright green colour; the flowers stand singly at the tops of the several branches; they are very large, of a lively red, and are contained in an elegant cup, composed of five narrow hairy leaves, which are of a much greater length than the flower itself; the seed-vessel is round, and the seeds black; they are frequently mixed among grain, and communicate a disagreeable taste to the flour.

The seeds only are used in medicine; they operate by urine, and remove obstructions; promote the monthly discharges, and are good in the dropsy and jaundice: these seeds should be powdered and made into an electuary, in which form they must be persevered in for a considerable length of time; for medicines, whose virtues are directed against chronic diseases, do not take effect at once, and the operation of vegetables is certainly slower, though in many cases not less efficacious than that of chymical preparations.

Sea Colewort, or Sea Bindweed.

THIS is a plant that grows wild on the sea-coast in many parts of England, and is said to possess many powerful virtues as a medicine; the stalks are twelve or fourteen inches in length, round, of a green or purplish colour, but they are weak and unable to support themselves upright; the leaves are also nearly round, though somewhat heart-shaped at the bottom; they are
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of a glossy green colour, and stand upon long foot-stalks; the flowers are large, of a bell shape, and red colour; the roots are small and white, and when any part of the plant is broken, and especially the root, it emits a milky juice.

The manner in which this plant is directed to be used, is to gather it fresh, when it is near flowering, and boil it in ale with some nutmeg, and a clove or two; this preparation, taken in quantities suited to the strength and constitution of the patient, is a strong purge, and sometimes operates also by urine; but this effect does not interrupt the other; people of robust constitutions, may take it with success; and it is recommended to cure dropfies and rheumatisms; and where the habit of body is strong enough to bear a few smart purges of it, it has been known to remove the consequences of recent venereal infection; if the juice which oozes from the stalk and root is saved, it hardens into a substance like scammony, and is an exceeding good purge.

Colt's Foot.

TO this common wild herb many virtues are attributed. It is so different in it's spring and summer state, that it is scarce to be known for the same plant; the flowers appear early in spring, without the leaves, growing on stalks about six or eight inches high; these stalks are round, juicy, and of a reddish colour, and bear a kind of films instead of leaves; the flowers grow singly at the tops of the stalks, are of a yellow colour, and about the size of those of dandelion, which they very much resemble.

After the flowers are withered, the leaves arise, and are as broad as a man's hand, round, and supported on thick hollow stalks; they are green on the upper surface, and white and somewhat downy beneath; the flowers are not regarded, the leaves only are used.

This herb is recommended to cure coughs, consumptions, and shortness of breath; a syrup made from the juice, or a strong decoction, sweetened with honey, are the preparations in which the greater part of it's virtues are contained.

Columbine.

COLUMBINE is a native of this country, though it is commonly preserved in gardens for the sake of the flower. It grows about two feet high; the leaves are divided into many parts, but seem rather to stand three together; the stalks are round, strong, erect, and somewhat hairy; the flowers large, and of a blue colour; the seeds are contained in a sort of horned pods; the leaves and the seeds are used in medicine; a decoction of the former, is reported to be a remedy for sore throats; and the seeds to remove obstructions, and for the cure of the jaundice, and other complaints arising from these causes: a decoction of the leaves and stalks is said to be useful in female weaknesses.

Comfrey.

THIS plant is commonly found by ditch sides in many parts of England; it rises to the height of a foot and a half; the leaves are large, long, but rather narrow, rough to the touch, and of a deep dingy green, they are thick, angular, and erect; the flowers, which grow near the tops of the branches, are white, though in some instances reddish, and they are of a small size, and sometimes hang downwards; the root is stout, black without, and irregular, but white when it is broken or cut, and full of a glutinous juice: this root is the part taken medicinally, and may either be used fresh, or made up into a conserve, with three times the weight of sugar; it is said to be a remedy for defluxions of sharp humours falling

falling on the lungs, occasioning consumptions, and for the whites; it is also recommended for spitting of blood, bloody fluxes, and other internal hæmorrhages, and for inward bruises.

Corolline.

THIS is a small sea plant, growing commonly about our own coasts; it is of a stony nature, but not like red or white coral; it does not grow above three inches high, and is very much branched; young shoots also spring from different parts of the branches; it is without leaves, nor are any flowers visible, but the whole plant is made up of short joints; it is commonly of a greenish cast, though sometimes of a reddish colour; but if it is thrown upon the shore, and remains sometime exposed to sun and air, it bleaches and becomes quite white: it naturally adheres to shells and pebbles. That which is freshest possesses the medicinal virtues which are considerably lessened by it's being bleached.

The principal use made of it is as a remedy against worms in children, from one scruple to half a dram for a dose.

Cornel Tree.

THIS tree is of the size of an apple tree, which it also resembles in manner of growth; the bark is greyish; the small branches tough; the leaves are oblong, broad, pointed, and of a beautiful green colour, but not indented at the edges; the flowers are small, and of a yellowish cast; the fruit is about the size of a cherry, but hath a larger stone; it is oblong, red, and fleshy; the skin astringent; it blossoms early in the spring, but the fruit does not ripen till autumn.

The fruit is used in medicine; it may be dried and administered in powder, or the

juice boiled into a syrup; either way it is said to be cooling and gently astringent, and is a safe and pleasant medicine in such fevers as are accompanied with purgings; and to restrain excessive discharges, either monthly, or after child birth.

A *wild cornel tree* grows in our hedges, which is called the *female cornel*, or *dog berry*; this is only a shrub, and seldom grows above four or five feet high; it has broad leaves and black berries; but this is never used medicinally.

Corn Marygold.

AMONG the many beautiful wild plants growing in corn fields, this is conspicuous; it has large blackish leaves, and bears flowers resembling marygolds; it rises to two feet high, and has numerous stalks, which are round, strong, tolerably upright, and much branched; the leaves are long, of great breadth, and of a bluish green; they are narrow at the base, and grow larger towards the end, and they are deeply indented at the sides; they are not placed on the stalks in any regular form; the flowers are nearly as broad as a half crown piece, and are of a very pleasing yellow colour, with a cluster of threads in the middle; the root is composed of a number of fibres.

When the flowers are fresh gathered and just blown, they contain most virtue; and are recommended to remove all obstructions, and operate chiefly by urine; an infusion of these flowers given in the quantity of half a pint warm three times a day, is said to have cured a jaundice, without any other medicine. The dried herb possesses the same virtue, but in a much less degree.

Costmary.

THIS plant is preserved in gardens, not much on account of it's beauty, but for virtues which were very liberally ascribed

cribed to it. It grows from twelve to eighteen inches high, and has clusters of naked yellow flowers resembling those of tanfy; the stalks are strong, stout, green, and erect; the leaves oblong, narrow, and of a pale colour, and beautifully indented; the flowers are only a number of deep yellow threads.

It was formerly in great reputation as a strengthener of the stomach, for relieving head-aches, and for removing obstructions of the liver and spleen, but of late years it's credit seems to have declined considerably.

The Cotton Thistle.

THIS is a wild plant, common by our way-sides. It grows to a considerable height and size, sometimes to four or five feet, and is known by having large white prickly leaves and red flowers; those leaves which spring immediately from the root, are sometimes a foot or eighteen inches long, of more than half that breadth, deeply indented at the edges, and armed with yellowish thorns; these leaves are of a whitish green, and seem covered with a downy matter resembling cotton, from whence it has it's name; the stalks are stout, round, substantial, and erect; they are also winged with a sort of leafy substance which rises from them, and are furnished with the same sort of prickles as are upon the leaves; the ordinary leaves, which grow upon the stalks, are like those which rise from the root, only that they are more deeply indented, and have many more prickles; the flowers are purple, standing in long prickly heads, making an elegant appearance; the root is very long, large, and white within, and this is the part used medicinally, the juice of which, when it is fresh gathered, removes obstructions, and cures the jaundice and dropfies, and other disorders arising from the same causes; it also moderately promotes the periodical discharges. Dried,

and given in powder, it answers the same purposes, but in a very inferior degree.

Couch Grass.

HOWEVER offensive this weed may be in the fields and gardens, it is said to have it's uses in medicine, and should teach us that the most common things are not therefore despicable, since it is certain nothing was made in vain. *Couch grass* grows to the height of two feet, and is a rude and strong kind of grass; the stalk is round, but pointed; the leaves grassy yet broader than other grass, and of a fresh green colour; the spike at the top resembles an ear of wheat, only more thin and flat, containing ten rows of grains; the root is white, small, extremely long, and full of joints, at every one of which it takes fresh hold, so that if but the least piece is left in pulling it up, it grows and increases with amazing rapidity.

The roots are used medicinally, and are to be fresh taken up and boiled: the decoction is recommended in the gravel and stone; and though it promotes urine strongly, yet it does not operate forcibly or roughly. Persevered in for a length of time, the same decoction removes obstructions of the liver, and is said to cure the jaundice.

Cowslip.

THIS pleasing plant grows spontaneous in the meadows, in most parts of England; the leaves are broad, of an oblong shape, indented, rough, and of a light green colour, inclining to white; the stalks are round, erect, strong, thick, and covered with down; they rise from six to eight inches high, and are destitute of leaves. At the top of each is a cluster of beautiful pale yellow flowers, each upon a separate foot-stalk, and in a distinct cup.

The flowers are used in medicine, and were formerly celebrated as specifics against apoplexies, palsies, and other sudden and violent seizures; at present, however, little confidence is placed in them, and the principal virtue attributed to them is, that given in tea, or preserved in form of a conserve, they have a disposition to promote sleep.

Cowslip of Jerusalem.

THIS plant, though not a native of Great Britain, is kept in gardens as much for the credit of it's virtues, as on account of it's beauty. It grows eight or ten inches high; the leaves are large, hairy, of a very deep green, marked with white spots on the upper surface, but of a paler green and without spots beneath; the stalks are slender, angular, and hairy, and bear smaller leaves, but of the same figure with those which rise immediately from the root; the flowers, which are small and reddish, grow in clusters at the top of the stalks; it has a fibrous root.

For the purposes of medicine, the leaves should be gathered before the stalks grow up, and when dried, they are directed in decoction for coughs, shortness of breath, asthmatic complaints, and all disorders of the lungs; taken in powder, they are said to stop the overflowing of female discharges; and fresh bruised and put into a new made wound, are reputed to stop the bleeding, and heal it.

Cow Wheat.

THIS plant is found wild in woods and thickets in several parts of England. It has narrow leaves, of so dark a green as to be almost black, though sometimes they incline to purple, and bright yellow flowers; it grows to the height of eight or ten inches;

the stalks are square and slender, weak, brittle, and very seldom altogether straight; the leaves are of an oblong form and narrow, broad at the base, and narrowing all the way to the point; and they are commonly, but not constantly, somewhat indented about the edges; the flowers hang all on one side of the stalk, in a sort of loose spike; these are small and yellow, and grow two together; they are followed by large seeds, which have something of the appearance of wheat, from whence the plant is named.

The seeds are used as a medicine; they are dried and given in powder, but small doses only should be administered: they are said to be highly cordial and strengthening; but if given in too large a dose, are apt to occasion the head-ache and giddiness; and instances have been known, of persons who have taken this medicine imprudently, being thrown into a state of stupefaction, and others who have seemed to lose their senses, and to appear as in a fit of drunkenness, on the recovery from which they have complained of numbness in their limbs, and have actually seemed in danger of death, though they have recovered after some hours without medical assistance.

The Crab Tree.

THIS beautiful tree is found commonly in hedges, where it arrives at considerable magnitude; the trunk is uneven, the bark rough, and of a dark colour, and the branches full of knots. The wood is hard; the leaves are broad and short; the flowers are large, and at their first opening are of a rich and delicate purple or crimson cast, and smell agreeably; the fruit is a small sour apple.

The virtues of verjuice, which is made from the *crab*, are well known. It succeeds better than most other applications,
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in removing complaints which arise from the falling down of the uvula, and is also good against sore throats, and in all disorders of the mouth; externally applied, it is excellent in making poultices for stiff joints, and mixed with water it is used in all cases of strains or bruises.

Cranebill.

THIS little herb is very frequently found under hedges, and in other undisturbed places; there are a variety of kinds, but that to which the greatest virtues are attributed, is called *herb robert*. This is a pretty plant, growing regularly; the stalks about a foot long, but seldom quite upright; they are round, branched and jointed, and are sometimes of a red colour, as is frequently the whole plant; the leaves are of considerable size, and divided into a great number of parts, they stand upon footstalks of some length, two at every joint; the flowers are of moderate bigness, and of a pleasing red colour; they have all together a striking and agreeable appearance. These flowers are followed by a fruit which is long and slender, and having some resemblance to the long beak of a bird, the name is derived from that circumstance.

The whole plant, root, stalks, and leaves, is to be gathered and dried for use; and is recommended as so excellent an astringent, that scarce any plant equals it. It may be given in powder, or a decoction may be made from the dried plant; it is said to stop overflows of the female discharges, to restrain bloody stools, and to check other internal hæmorrhages.

It is remarkable that this herb, and some others which have the peculiar virtue to stop bleedings, become all over as red as blood at certain seasons.

Fried in vinegar, and applied outwardly, in a poultice, for a sore throat or quinsy, this herb is said to be infallible; and some of the liquor mixed with honey, is an

excellent gargle to be used at the same time.

Garden Cress.

A Plant so universally used in sallads, must be well known. In a rich soil, it grows two feet high; the stalk is round, strong, and of a blueish green; the leaves are divided into many different parts; and the flowers are very small, and perfectly white: the leaves rising immediately from the root only, are eaten at table; these are large, finely divided, of a fine lively green, and sharp; taken in considerable quantities, they are a remedy for the scurvy; the seeds remove obstructions.

Water Cress.

THIS plant is found in shallow rivers and ditches, in every part of Great Britain. It sometimes grows to the height of a foot; the stalks are round, thick, (but in general bent and crooked) of a light green, and much branched; the leaves are also of a lively green, divided like wings, and obtuse at the extremities; the flowers are small and white, and grow in a kind of spike at the top of the stalks.

The leaves and early shoots are used; they may either be eaten in the manner of the garden cress, in which way they are altogether as pleasant, or they may be boiled, and are then excellent against the scurvy; the juice expressed from them possesses the same virtues, and operates powerfully by urine, removing obstructions.

Sciatica Cress.

THIS plant is only found in particular parts of the kingdom; it grows a foot high; the stalk is round, short, and straight, of a pale green colour; the leaves are small, long, and of the same colour as the stalk; the flowers

flowers stand at the tops of the several branches into which the stalk divides as it rises, these are white and small; the leaves, which spring immediately from the root, are about four inches long, narrow, and finely indented at the edges; these are of a deep green.

The leaves are highly recommended in that disorder which is called the sciatica or hip-gout; they are directed to be applied externally, by way of poultice, or as an ointment beaten up with lard; in the former way, the poultice must be changed as it becomes dry. It appears, by it's name, to be an approved remedy, though it is but little in use.

Wart Cresses, or Swines Cresses.

A Small wild plant which grows commonly about the fields and gardens, spreading upon the ground; the stalks are five or six inches long, strong, and stout, but usually lying flat on the earth; they are very much branched, and full of leaves; those leaves which rise immediately from the root, are long and deeply divided, and those on the stalks only differ from them in being smaller; they are of a deep shining green colour, and perfectly free from any hairiness; the flowers are small and white, and stand at the extremities of the branches, and between the leaves; the seed vessels are small, and covered with a rough coat.

This is said to be an admirable diuretic, equally safe and powerful; it is one of the ingredients of which Mrs. Stephens's medicine is composed; the juice is prescribed for the jaundice, against all inward obstructions, and the scurvy; the leaves may either be eaten as sallad, or dried and given in decoction.

Cross Wort.

THIS, though a wild plant in England, is not very common. It rises to the height of a foot and a half; the stalks are

square, hairy, feeble, and of a palish green; the leaves are broad and short, and stand four at every joint, placed in a regular star-fashion upon the stalk; the flowers are small and yellow, growing in clusters round the stalk, at the joints, and springing from the insertion of the leaves. It is found in dry places.

The whole plant being gathered when it begins to flower, and dried, is prescribed in a strong decoction as a good restraining and styptic; it is said to stop purgings, even when there are bloody stools, and overflowsings of the periodical evacuations of blood.

Crow Foot.

THERE are many sorts of this common wild plant, but the kind used medicinally is that most common in meadows, and distinguished by the name of the *common creeping crow foot*. It seldom grows much more than a foot high, the stalks are strong, thick, branched, and of a palish green, but they are not often quite straight; it has but few leaves on the stalks, but they are finely divided; the flowers are about the size of a shilling, and of a fine shining yellow colour; they grow at the tops of all the branches; those leaves which rise from the root are larger than those on the stalks, and sometimes divided into only three parts; they are frequently spotted with white.

This plant is caustic, and poisonous; yet it is sometimes imprudently mixed with sallad, in which case it may be productive of danger. The leaves are said to be excellent, applied externally, in palsies and apoplexies; acting quicker than cantharides in raising blisters, and are more sensibly felt. It is astonishing that a medicine so easily had, and so efficacious, is not more commonly used for this purpose! But perhaps this quality is not generally known.

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There are two other kinds of crow-foot, both known as poisons, a character to which indeed that which we have described is intitled: the two most pernicious kinds are that called spearwort, which has long and narrow leaves, but undivided; and one with very small flowers and leaves, broad and indented. Both these last mentioned forts grow in watery places.

The Cucumber Plant.

THIS plant is so well known as to require little description; the stalks are a yard or two in length, thick, but spreading upon the ground, angular and hairy; the leaves are broad and of handsome appearance, deeply indented, very rough, and of a full green colour with a bluish cast; the flowers are large and yellow; the fruit long and thick; the seeds only are used in medicine, and to have these in perfection, the fruit should be suffered to remain on the plant till they are very ripe, before they are gathered. The seeds are cooling and diuretic, and are useful in stranguries, and all disorders of the urinary passages; they are best administered beaten up into an emulsion with barley-water.

Cuckow Flower, or Ladies Smock.

THIS beautiful wild plant adorns the meadows of various parts of the kingdom, in the spring months; it grows to the height of a foot; the leaves, which rise immediately from the root, are regularly and beautifully winged, and spread in a circular form; the stalk is round, thick, strong, and erect; the leaves which grow on it are smaller than the others, finely divided, and stand singly; a spike rises, on the tops of which the flowers grow in little clusters, and some from the bottom of the leaves;

they are of a large size and a fine white, sometimes elegantly tinged with a blush of red.

The juice of the fresh leaves is used as a diuretic; and, acting in that way, is good in the gravel, jaundice, and green sickness; a course of it has succeeded in curing the scurvy.

Cudweed.

THERE are many species of this common wild plant, but that used in medicine is called the *middle cudweed*, or *herb impious*; it has this last strange appellation, from an observation that the young flowers rise above the old ones, which was formerly termed the son's getting above his father. This cudweed is a small low plant, seldom rising a foot high; the stalks are white, tough, strong, and upright, though slender; they are very thick set with small, oblong, white, and pointed leaves, which do not often lie very even; the flowers consist of a sort of brown or yellowish head growing at the tops, and in the divisions of the stalks.

This herb is said to stop bleeding, if it is bruised and applied to a new wound; dried, and given in decoction, it is prescribed against the whites, and to stop violent purgings; a water distilled from this plant was formerly recommended for the early stages of cancers, being applied by wetting linen rags with it; a decoction of it is also directed in quinies.

The Black Currant.

THIS shrub is universally known, and to be found in every garden; it sometimes grows four or five feet high; the branches are weak, and the bark is smooth; the leaves are larger and broader than the red currant, but are divided in the same manner;

manner; they emit a very strong and somewhat offensive smell.

The blossoms resemble those of the red and white currant, being greenish and hollow; the fruit is a large round berry, black, and of a taste rather disagreeable to some palates; it grows in bunches like other currants, but more distant on the stalks.

The juice of *black currants* boiled with sugar to a jelly, is an excellent remedy against sore throats, or it may be brought to such a consistence, without sugar, as to make an admirable lozenge; the jelly of black currants, with a mixture of warm water, makes an incomparable gargle, and these currants, as well as the red and white, are cooling, cleansing, and opening.

Long Cyperus.

THIS plant grows wild in marshes, fens, and other damp places, in various parts of England; it seldom exceeds eighteen inches in height; the leaves are upwards of a foot long, flat and narrow like grass, of a lively green colour, and sharp at the ends; the stalk is triangular and green, and bears no leaves, except two or three small ones at the top, from which rise several small tufts or spikes of flowers; these are of a brown colour, light, chaffy, and in all respects like those of the other grasses which are found in waters or watery places. Of this plant the root only is used; it is long and of a dark colour, and when dried is pleasantly scented, and of an aromatic warm taste; it should be taken up in spring, and is recommended to relieve pains in the head, and operates by urine.

The Cypress Tree.

THIS tree, though not a native, is preserved in the gardens of Great Britain; it is an evergreen of singular growth; it

reaches to the height of twenty or thirty feet, and is beset thick with branches, almost from the ground; these branches are largest towards the bottom, and smaller by degrees towards the top, so that the tree forms a natural cone; the bark is brown inclinable to red; the leaves small and short, covering all the twigs like scales, and of a beautiful deep green; the flowers are inconsiderable in size, and of no great beauty; they are succeeded by a kind of nut of the size of a small walnut, and nearly the colour of the bark; these are of a hard substance, and the fruit, when ripe, divides into several parts, and admits the seeds to fall out.

The fruit is the part used in medicine; it should be gathered before it bursts, and being carefully dried may be given in powder, in doses of five and twenty grains each, or less, according to circumstances. It is reputed to be balsamic and styptic, stopping bleeding of the nose and spitting of blood, bloody-flux, and overflowing of the female discharges; for these purposes it is said to be scarce equalled by any remedy of the vegetable kind.

Common Daffodil.

THIS is an English plant, and grows wild in almost every undisturbed place; it has narrow leaves, and large yellow flowers; but besides these wild flowers, there are many found in our gardens in a great variety of shapes, which it has acquired by culture. In the wild state it is about twelve inches high; the leaves are long and narrow like grass, of a deep green, and nearly as tall as the stalk, which is roundish, but somewhat flattened and indented at the edge; the flower is large and single, standing at the top of the stalk, and by its weight pressing it somewhat down; the root is round and white, and this is the part which is to be used medicinally, and as its virtues are lost by keeping, it is always prudent, and attended

ed with little trouble, to have it in readiness in a garden. Given internally in a small quantity it acts as an emetic, and afterwards purges gently; and it is said to be excellent in removing obstructions. The best form of administering it, is in the juice pressed out and mixed with white wine, but it is principally used externally.

The fresh roots are bruised and applied to green wounds, which it is said to heal very suddenly; it is also successfully applied to strains and bruises, taking away the swelling and relieving the pain.

The Great Daisy.

THIS is a wild plant, which is too common in our fields, to be much esteemed in gardens; it sometimes rises above a foot high; the stalks are angular, firm, and upright, though they are but slender; the leaves are of an oblong form, narrow, indented round the edges, and of a fine dark green; the flowers, which stand on the tops of the branches, are white, and about an inch broad, resembling very much the white China star-wort, a plant cultivated in our gardens; the root is small.

The flowers only are used in medicine; they must be gathered as soon as they blow, and dried, and may be afterwards administered either in powder or infusion; they are prescribed as a remedy for coughs and shortness of breath, and disorders of the lungs; their qualities are balsamic and strengthening.

The Little Daisy.

THIS plant needs as little description as the former; the leaves are oblong, wide, and obtuse; the stalks seldom exceed three or four inches in height, and are without leaves; the flowers grow singly, one on each stalk, are of the breadth of a

shilling, and whitish or reddish; the root is composed of a vast number of fibres.

The roots, fresh gathered, are given in a strong decoction, and are said to be excellent against the scurvy; the use of them must be persevered in some time, but the event generally rewards the patience of the sick.

An idle notion formerly prevailed, that these roots, boiled in milk, keep puppies from growing large, but it is certain they produce no such effect.

Dandelion.

THIS also is a wild plant too common to require description; the leaves are long, broad, and deeply indented at the edges; the stalks are without leaves, hollow, green, erect, and from six to ten inches high; on each stalk stands one flower, which is large, yellow, and composed of a great number of leaves, and the seeds which succeed it have a downy matter affixed to them. In the seed state the whole head appears globular; the root is long, large, and white within; every part of the plant is full of a milky juice, but most of all the root, from which, when it is broken, it flows plentifully, and is bitterish, but not disagreeable to the taste.

A decoction is made from the root, fresh gathered, which promotes urine, and brings away gravel; the leaves are sometimes eaten as sallad when very young, and in some parts of the continent they are blanched like celery for this purpose; taken this way, in sufficient quantity, they are a remedy for the scurvy.

Red Darnel.

THIS wild grass grows very common about road sides, and is distinguished by stubborn stalks and low growth, seldom exceeding

exceeding a foot in height, but often much less; the leaves are narrow, short, and of a dull green; the stalk is strong, rather flat, erect, and of a reddish colour; the ear is also flat, and composed of a double row of short spikes; the colour of the ear is inclinable to purple; the root is composed of a great number of whitish fibres.

The roots dried and given in powder, are represented as making a very excellent astringent medicine, of use in violent purgings, overflowing of the periodical evacuations, and all other fluxes and bleedings; but the operation of it is slow, and perseverance is required; it is, therefore, more proper to be administered for habitual complaints of this kind, than for such as are brought on by any sudden illness.

There is another kind of *darnel* with white flowers, concerning which an old opinion prevailed, that the seeds of it, when by chance mixed with corn, and made into bread, occasion dizziness of the head, sickness of the stomach, and produce all the bad effects of drunkenness; but this apprehension does not appear to be well founded. This is a taller plant, and more common in corn-fields than the red.

Devil's Bit.

THIS plant is frequently found wild in meadow grounds, and has slender stalks, and flowers of a globular form. It grows two feet high; the stalks are round, strong, and straight, and are divided into many branches, they have also many joints, at each of which grow two little leaves; the flowers are in tufts as big as a small walnut, composed of many lesser ones, their colour is a very strong and beautiful blue or purple; the leaves which grow from the root, are not above four inches long and one broad, obtuse, of a dusky green colour, and a little hairy, but not divided, or even indented at the edges; the roots are white

within, and composed of many fibres, and a thick head, which terminates abruptly, as if it had been bitten or broken off. The monks asserted that the devil bit it away, envying mankind its virtues.

The leaves gathered before the stalks appear, and made into a decoction, are said to relieve coughs, and disorders of the lungs; the root dried and given in powder, promotes perspiration, and was formerly esteemed a good medicine in contagious fevers, bites and poisons of venomous reptiles, wind, worms, wounds, and many other disorders, but it is not at present much used.

Dill.

THIS plant was formerly kept in our gardens for the use of the kitchen. The stalk is round, ribbed, hollow, erect, and rises to the height of three feet, and is divided into a great number of branches; the leaves are also divided into numerous narrow and long parts, very much resembling fennel, but not so large; the flowers are small, and of a yellow colour, they stand in clusters on the tops of the branches; the root is small, and somewhat woody; the seeds of *dill* are prescribed as a remedy for wind and colical complaints; they were also formerly said to be specific against the hiccough, but this seems to be rather doubtful.

Dittander.

THOUGH this herb grows wild in some places, it is more frequently met with in gardens. It is a tall plant, with broad leaves and small white flowers; the stalks are round, strong, of a light green, and very much branched; it sometimes reaches the height of three feet; the leaves are large toward the bottom, but are smaller as the stem

stem rises, and the flowers stand in a kind of loose spikes; the lower leaves are elegantly indented, though the others are scarce perceivably marked. The seeds are contained in small round pods, and are hot and pungent to the taste. From the fresh leaves of *dittander*, boiled in water, a decoction is made, which operates by urine, and promotes female discharges, as well the periodical as those after delivery.

Dittany of Crete.

THOUGH this little plant is a native of the east, it is kept in some of the gardens of the curious in this country, but rather on account of it's beauty than for the merit of those virtues which were formerly ascribed to it. It grows to the height of six or eight inches; the stalks are jointed, square, hard, somewhat woody, but slender, and branched; the leaves, which stand two at each joint, are short, broad and round, and are covered with a white downy matter; the flowers are small, and of a purple colour, growing in an oblong shape, and bearing slender scaly heads, resembling those of marjoram: these heads constitute a considerable part of the beauty of the plant, being variegated with green and purple. The whole plant emits a most agreeable smell.

The leaves are still kept dried in the druggists shops, though it is not at present in any great degree of reputation for the cure of wounds, a quality attributed to it by the ancients; nor is it at this time often used alone: it is, however, said to be useful in nervous disorders, to promote the periodical discharges, and to strengthen the stomach.

White Dittany.

THIS, like the former, is a native of the warmer parts of Europe, but is kept in the gardens here; it rises to the height

of three feet, is very much branched, and extremely beautiful; the stalks are round, large, strong, and of a green colour, sometimes inclining to purple; the leaves, which stand on them without any regular order, resemble those of the ash tree, but are somewhat smaller. The flowers are of considerable size, and elegant; they are either of a faint red, white, or striped, and stand in spikes at the extremities of the branches. In the warm season, the whole plant is covered with a kind of balsam, glutinous to the touch, and extremely fragrant to the smell; and this is of a nature so inflammable, that if a candle is applied to any part of the plant, it takes fire, communicates instantaneously to the whole surface of it, and goes off in a flash like lightning; and what renders this phenomenon the more extraordinary is, that it does not appear to injure the plant, but may be repeated after three or four days, a new covering of the balsam being produced in that time. The roots of this plant are medicinally used; they are recommended in fevers, and in nervous and hysteric complaints; but they do not appear to be very efficacious. An infusion of the tops of the plant is said to be a pleasant and useful medicine in the gravel, working powerfully by urine, and relieving those colic pains which commonly accompany that disorder.

Sharp-pointed Dock.

THIS plant is chiefly distinguished from the ordinary dock, by being rather more handsome; and by the figure of it's leaves, which are sharp-pointed, instead of being obtuse, and are also somewhat narrower and longer; it grows three feet or more high; the stalks are upright, round, ribbed, and branched, and of a green colour; the leaves are of a more lively green, smooth, and neither wrinkled on the surface, nor curled at the edges; they have

peculiarly large ribs; the flowers are but small; at first they are greenish, then grow paler, and as they dry, become brown. The root is long and large, and of a tawny colour.

The root is used in medicine, and is prescribed as a remedy for the scurvy, and for sweetening the blood; for which purpose it should be given in diet drinks, and decoctions; and in this way it is said to produce wonderful changes in bad habits. Externally applied, it has the reputation of curing the itch, and other foulnesses of the skin; the leaves and stalks should be beat up with lard for outward use.

Great Water-Dock.

AL the several plants of the dock kind have a general resemblance; and this is the largest of all, and most like the last described, in it's manner of growth, though vastly superior in size; it grows commonly about waters, and reaches to the height of five or six feet; the stalks are round, thick, ribbed, and very straight, somewhat branched, and hollow. The leaves are of great bigness, of a pale green colour, smooth and sharp at the points. The flowers are small, and of a very indifferent appearance, being at first of a greenish colour, with some white threads, and afterwards becoming brown. The root is large, long, and of a brown colour, inclining to red.

This plant has of late years been highly extolled as a remedy for the scurvy, the root contains the virtues; and it is to be given in decoction or infusion, though the latter is the preferable way. The seeds of this, as well as the other docks, are astringent, and good to restrain violent purgings. A late botanist extracted an essence from the root of the greater water-dock, which he sold as a specific in scorbutic disorders.

Garden Dock, or Monk's Rhubarb.

THIS plant of the dock kind is a native of Italy, but is preserved in our gardens for medicinal uses. It grows exceedingly tall, sometimes six or seven feet high; the stalk is round, thick, erect, and strong; the leaves are of a very considerable size, both in length and breadth, and are pointed at the extremities: they stand upon strong hollow footstalks;—and the great stalk of the plant is frequently red. The flowers, like those of the other docks, are greenish and white at first, and afterwards turn brown; but they are in general not so small as those of the other kinds. The root is proportionably large and long, and is divided into several parts; the bark is of a brownish yellow, and within it is of a more full yellow mixed with red, and this is the part used. It has received the name of *monk's rhubarb* from an idea of it's possessing some of the virtues of the true rhubarb; but if it does, it is only in a very slight degree, being very little purgative, and still less astringent; it works rather more by urine than by stool, and is recommended in the jaundice, and other disorders occasioned by obstructions.

The plant of the dock kind, which is kept in gardens, and called *bastard rhubarb*, is sometimes mistaken for this, but the leaves of it are more round; if it has the same virtues with the monk's rhubarb, it's efficacy is so very inferior, even to that plant, that it cannot be used instead of it without injury.

Dodder.

THIS singular plant, is found in many parts of England, and particularly the western counties. It consists of only stalks and flowers, for it has no leaves, nor any growth which at all resembles them.

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The stalks are extended to the length of a foot or two, fastening themselves to other plants; these stalks are of a purplish colour, not larger than a small packthread, but more tough and strong than could be expected from their size; these are so twitted about the branches of the plants, and entangled with each other, that it is hardly possible to trace them to their sources. The flowers grow in little tufts or heads, and are small and of a reddish colour, each flower is succeeded by four little seeds.

As a purge *dodder* should be used fresh gathered; it may be boiled in water, with a small quantity of ginger and all-spice, and the decoction works smartly by stool; it is said to open obstructions of the liver, and other intestines, and to be a remedy in the jaundice, and other disorders arising from the same causes.

There is a *dodder* imported from abroad, which is supposed to grow upon the garden thyme, which was formerly preferred to the others, and was supposed to derive peculiar virtues from the plant on which it grows; but this is mere imagination, and experience has shewn that it acts only as a purge, like the other, but weaker; and therefore the common *dodder* is preferable to it in England, because it can be gathered fresh; the other we only have dry, and it frequently loses a great deal of it's virtue by laying long in the hands of the druggist.

Dog Mercury.

THIS herb is extremely common, but it is a poison and not a medicine, and we describe it, least it should be gathered and fatally used instead of some salutary plant. It grows commonly under hedges, and in the spring of the year makes a pretty appearance; and as it's aspect is by no means disagreeable, without some caution ignorant people might very naturally be tempted to eat of it among other spring herbs, nor have botanical authors in gene-

ral taken such notice of this plant as the dangerous qualities it possesses seem to require, we shall therefore be more minute in our account of it, that no person may be at a loss to discover it.

Dog Mercury grows about a foot high, and has only a few very large leaves; the stalk is round, strong, whitish, and somewhat hairy; the leaves grow chiefly toward the top, and seldom exceed in number four, five, or six; they are long and proportionably broad, sharp at the points, notched about the edges, and, like the stalks, somewhat hairy. The flowers are inconsiderable, standing in spikes at the extremities of the stalks, and the seeds grow on separate plants, and are double and roundish; from this circumstance the herb has been divided into two kinds, male and female, but these distinctions of the sex were formerly applied wrong; those which bear the flowers are unquestionably the male plants, the others which produce the seeds the female.

No plant or herb found in Great Britain, is more fatal than this of which we now treat. Many unfortunate persons have been destroyed by eating it boiled accidentally with other herbs, and probably many others have suffered in the same way, without the cause being discovered.

Among all the writers on British plants, one only gives an account of it as a poison, and sufficiently warns all who read him, from the use of this herb; but the book in which this is mentioned, is written in Latin; and those to whom the information would be most useful cannot read it: other writers mention it in common with other mercuries; which, as some of them are eatable, may be productive of very melancholy consequences.

Dog Tooth.

THIS pretty little plant is a native of Italy, and grows wild also in some parts of Germany; with us it is only preserved

in gardens; it has two broad leaves, and a large drooping flower; it is not above five or six inches high; the stalk round, slender, feeble, and greenish towards the top, though it is sometimes white at the bottom; the leaves stand a little above the ground, are of an oblong shape, rather broad, of a pleasing green, not indented at the edges, and blunt at the ends; by these leaves the stalk is inclosed at the foot; the flower is large and white, somewhat tinged with red; it droops, and is long, hollow, and very beautiful; the root is round, has a few fibres growing from it's bottom, and is full of a slimy juice.

The roots, fresh gathered, are used medicinally; but they will not bear keeping, generally losing their virtues by drying; they are recommended as a remedy for the worms in children, and are said to have a wonderful and speedy effect in relieving those violent pains in the belly, which are occasioned by these disagreeable guests; the expressed juice is the form in which it is directed to be given, or if the little patients cannot be prevailed on to take it in this way, the roots may be boiled in milk, to which they give very little taste; as it operates powerfully, and small doses will take effect, especially of the juice, it is best to begin with a very small quantity, and as that agrees, to increase it in such a way as the strength and stomach will bear.

Dragons.

THIS is a large and handsome plant, and is kept in gardens as well for it's medicinal virtues, as for it's beauty; it sometimes reaches the height of four feet; the stalk is substantial, round and hard, perfectly smooth, and marked on the surface with a variety of colours, such as purple, white, and green. The leaves are of a very large size, standing on long foot-stalks: they are of a dark and full green, and each

leaf is divided into several portions, like the distribution of the hand into fingers: the flower is like that of the cuckow pint, and is contained in a hollow case, green without, and of a deep purple within; after this flower falls, large red berries appear in clusters. The whole plant is of an acrid and intolerable taste.

The roots, stems, leaves, and flowers of this plant, may be gathered and dried; after which it may be made into a powder, administered in decoction. It was formerly much esteemed in malignant fevers, and the small pox; but it retains at present very little of it's credit, and is only used in some compositions.

Drop Wort.

THIS plant, which grows wild, is about two feet high, and bears tufts of whitish flowers, and leaves finely divided. The stalk is round, strong, erect, ribbed and branched. The leaves are large, and divided into numerous parts; they rise principally from the root, standing on slender foot-stalks; the stalks have but few leaves, and those are small: the flowers are distinctly of inconsiderable size, but they stand in large tufts at the extremity of the branches. They are white within, and often but not always reddish on the outside; the seeds are flat, and grow several together; the root, which is the part most used in medicine, is composed of a great number of small lumps, fastened together by fibres; it is recommended in fits of the gravel and stone, promoting the discharge of urine with effect and safety; for this purpose the juice is to be given, or a strong decoction may be made of the fresh root. It may be given dried and powdered to restrain the whites and purgings, being equally gentle and safe as an astringent.

But there are also several other plants distinguished by the names of *drop-worts*, which possess very different qualities; and
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One of them, which is the hemlock dropwort, is said to be poisonous in a very high degree; but the right kind is sufficiently different from the others not to be mistaken by persons of any knowledge or attention. The flower of this consists of six little leaves, and it has many yellow threads in the middle; the flowers of all the other sorts are composed of only five leaves each. The flowers of the right sort grow in clusters, close together; those of the other sorts are more distinct.

Duck Weed.

THIS herb is universally known, consisting of small, round, single leaves, which lie floating upon the surface of the water, from which also the roots derive their nourishment, hanging suspended in that element, without sticking into the mud at the bottom or sides; with this small green herb almost all our standing waters are covered in the summer; but there are three kinds of it: that which we now describe; another with smaller leaves, from each of which shoot many fibres; and a third kind with larger leaves, of a purplish colour beneath; but as all these sorts possess the same virtues, it is indifferent which is taken. The juice expressed from the leaves, and continued for several days, is said to work powerfully by urine, and to remove obstructions of the liver, on which account it has been given in the jaundice with great success.

Dwarf Elder.

THIS shrub so much resembles the common elder tree, that it may be easily mistaken for it, without careful examination; contrary, however, to that tree, it seldom grows above four or five feet high; the stalks are green, round, brittle and straight, and have much the appearance of the young shoots of elder; but this plant has no

woody part from whence they spring; the leaves are large, and consist of several pairs of others like those of elder, with a single one at the end; but the leaves of this plant are longer than those of the elder, and are lightly indented round the edges. The flowers are white, and of a small size; but they stand in very large clusters as those of the elder; they are succeeded by berries, which turn black when they are permitted to ripen: but this seldom happens, the birds being so immoderately fond of them, that they devour them the moment they come to maturity. The root is white and creeping, and survives the winter, but the stem and leaves die every year to the ground.

It is not very commonly found wild in England, though a great quantity of it formerly grew at the back of Cuper's Gardens, and perhaps may be still found about that neighbourhood. The juice of the leaves and stalks works strongly both by stool and urine, and in this way is said to have cured dropries. Some dry the plant, and use it in decoction, but it is less efficacious.

Dyers Weed.

THIS weed grows on dry banks and upon walls, and may be known at first sight by its straight stalks, and very long spikes of small yellow or greenish flowers; it rises to four feet or more in height; the stalk is large, strong, channelled, and mostly covered with leaves, which do not bear proportion in size to the bigness of the plant, but are oblong in shape, and grow narrow and pointed at the ends; these are also of a yellowish green colour, and not indented at the edges; the bottom of the stalk is surrounded by a ring of the same kind of leaves, but larger; the root is long, and white within.

The only virtue that seems to be attributed to this plant, is in the removal of the king's evil; for this disorder the flowery

tops are directed to be dried, and given in a decoction; but it is extremely doubtful whether it has ever proved a successful remedy.

Elder.

THIS shrub or tree is well known. It is of irregular growth; the stem or trunk is covered with a rough whitish bark, and the wood is firm, but hollow within and full of pith, but this is less perceivable in the largest parts of the shrub, though it is never quite filled up; the young shoots are long, of considerable size, and green; they are of quick growth, and frequently do not begin to change colour or grow woody till they are a yard in length, the quantity of pith then lessens, their bark as they stand becomes brownish, and their under surface woody; the leaves are composed of several pairs of small ones, with a single or odd leaf at the end; the flowers stand in vast clusters, rather loose and open, and each distinct blossom is small and white; they are succeeded by berries, which grow black as they ripen, and are full of a purple juice. There is another kind of elder, with berries which are white when they are ripe, and which differs but little in other respects from this with black fruit; and a third sort with jagged leaves, but no otherwise different.

Many medical virtues are ascribed to the elder. The inner bark of it is a strong purge, and it is reputed to cure dropsies when taken in time, frequently repeated, and long persevered in; a cooling ointment is made by boiling the flowers in lard till they are crisp, and then straining it off; the juice of the berries boiled down with sugar, or without, till it comes to the consistence of honey, is the celebrated *rob of elder*, highly extolled in colds and sore throats, though of late years it seems to have yielded to the preparations of black currants. Wine is made

of elder berries which somewhat resembles Frontinac in flavour.

Elecampane.

THIS is a tall stout plant, growing wild in some parts of England, but generally kept in gardens for medicinal purposes; it grows four or five feet high, and the flower is of considerable size and a yellow colour; the stalk is round, large, and erect, very strong, and of a reddish cast; the leaves are long, proportionably broad and rough, they are pointed at the ends, and of a light green colour; the flowers grow at the extremities of the branches, and in some respects resemble the double sunflower; they are sometimes so large as to be near two inches in diameter, and are elegantly formed and of a fine yellow colour; the root is long and large, brown on the outside, and white when it is cut or broken.

The root is used medicinally, and possesses most virtue when it is taken fresh out of the garden, though the dried roots imported from Germany are generally administered. It is the opinion of some writers, that few plants are more serviceable than this, which relieves disorders of the breast and lungs, opens obstructions, operates powerfully by urine, and still more by perspiration; the juice of it is said to be a cure for the itch, applied externally. It is, however, generally prescribed as a remedy for coughs, for which purpose it is to be taken candied; and in this way a small piece of it may be held almost perpetually in the mouth, and the juice swallowed gently, which will in general answer better than larger doses swallowed at once.

Elm.

AN English timber tree which grows to a very great magnitude, and is found in rich and fertile soils throughout the kingdom;

kingdom; the bark is brown, rough, and of an irregular surface; the twigs are also of the same colour, and very tough; the leaves are small, but broad and short in proportion to their bigness, rough to the touch, and finely indented round the edges; they terminate in a point. The flowers are scarce observed, they appear before the leaves, and for the most part towards the tops of the trees; and they are only a kind of threads; the seeds are flattish.

The inner bark of this tree, boiled in water, is said to make a better gargle for a sore throat than almost any other that can be prescribed: it must be sweetened with honey of roses; and it is extremely soft and healing, notwithstanding it's very cleansing qualities.

Two or three other kinds of *elms* may be found in garden hedges, which have been imported from other countries; but the bark of the English rough elm which we have described, is to be preferred to all of them as a medicine.

Endive.

THIS fallad herb is universally known; it rises two feet high, and bears blue flowers; as it is brought to the table, it is curled and blanched, and looks beautifully. There are two sorts of *endive*, one with narrow, and the other with broader leaves; and both are cultivated for the kitchen, but the former is most common; of this the leaves are long and narrow, blunt at the ends, and deeply indented, or rather divided at the edges, and of a yellowish colour, inclining to green; the stalks are round and strong, and the leaves that grow on them, resemble those from the root, but are inferior in size. The flowers stand at the extremities of the stalks and branches; they are of a fine blue colour, and in shape and structure like the dandelion: they are extremely elegant.

It is asserted, that the juice of *endive*

may be taken with great advantage as a medicine in many cases, cooling the stomach, and operating very powerfully in removing obstructions in any of the intestines. It is of course a remedy for the jaundice; and if it be persevered in for a length of time, is said to cure the scurvy.

Eringo.

THIS plant grows wild by the sea-side on most of the coasts of England, and it's virtues have given it a place in the gardens. It is as prickly as a thistle, and the whole plant appears of a whitish green; the stalk is strong, woody, round, channelled, and substantial; not very straight, but branched and spreading irregularly. The leaves, which are of a pale green, with a bluish cast, approaching to white, are small but broad, of an oblong shape, notched and prickly. The flowers grow in heads at the extremities of the stalks; and immediately under them is a circle of small leaves; the flowers distinctly are small, and of a pale green, almost white; but collected in the head, appear tolerably large. The root is long, small, and of an agreeable taste.

The root of this plant candied with sugar, is recommended to ease violent coughs, and to restore weakenesses of all kinds. It is also said to possess many virtues as a diuretic, and to be excellent in the jaundice: for the last purpose a decoction should be made from the fresh root; and this preparation of the root is also prescribed in stranguries, and other complaints, which originate in the kidneys; nor are the effects of these roots less valuable as a balsamic than as a diuretic, being given in consumptive cases with great success.

Eyebright.

THIS is a low herb, which grows commonly in the meadows in different parts of Great Britain; it has woody stalks, and variegated

variegated flowers; it's height does not exceed six or eight inches; the stalks are round, strong, substantial, and very hard; the leaves are broad, thin, and very deeply indented at the edges; and of a bright shining green; the flowers are small and very bright, the ground of them is white, and they are streaked and spotted with black, or a very dark hair colour.

This plant has been celebrated for helping dimness of sight; for this purpose it has been directed to be taken internally, either the leaf dried and powdered, or fresh in decoction or tea; the juice of the leaves, or a water distilled from them, are also recommended as external applications when the eyes are inflamed; but it has lost much of it's ancient reputation, it is however allowed to be an excellent diuretic.

Fennel.

FENNEL is so universally used in the kitchen, that it does not require much description, though it may be proper to notice it, as it is said to possess some medicinal virtues. It sometimes rises to the height of six or seven feet; the stalk is round, hollow, and of a dark green colour; the leaves are large, but they are divided into a vast number of fine and slender parts, which are also of a deep green colour, inclining to blue; the flowers, which stand at the top of the branches, are small and of a yellow colour, but they grow in large clusters; the seed is small, of a dark colour, and channelled or ribbed, and the taste is acrid and aromatic; it has a long and white root, and this is the part used medicinally. Boiled in common water, and given in large quantities, it is said to work by urine, and to be a remedy for the gravel, stone, and jaundice. It was formerly highly esteemed for disorders of the eyes, and was used for these complaints both externally and inter-

nally; and in the latter way it was considered as a strengthener and restorative.

Sweet Fennel.

THIS plant, which is only found in gardens, resembles very much the common kind, but is of a paler colour. It grows to the height of four feet; the stalk is round, hollow, channelled or ribbed, erect and branched; the leaves are large, divided into a great number of parts, in the same manner as those of common fennel, and both the leaves and stalks are of a pale green, with a yellowish cast, and not of so dark a colour as the other kind. The flowers are also yellow, and stand in small clusters; two seeds follow after each flower, but these differ from those of the common fennel in size, shape, colour, and taste, being long, slender, of a paler colour, somewhat crooked and deeply furrowed, and their taste sweetish and rather acrid.

Of the sweet fennel, the seeds are the only part used; they are said to be excellent in the colic, and are used externally with success in poultices to disperse and reduce swellings.

Fennel Flower.

THE flower of this name, kept in gardens, has no other resemblance to the fennels, just described than the structure of the leaves. It grows a foot or eighteen inches high; the stalk is firm, round, ribbed, erect, and hollow; the leaves are divided, like the others, into a multitude of fine slender parts, but considerably smaller, and from this circumstance it derived the English name of *fennel flower*. These leaves stand irregularly on the stalks, and are of a palish green; the flowers stand at the extremities of the branches, and are of singular

singular elegance. They are generally blue, but sometimes white; of moderate size, and the green leaves inclosing the flowers give them a peculiarly pleasing appearance.

It has been asserted, that the juice of the plant, fresh gathered, is serviceable in the head-ache; and being snuffed up the nose, occasions sneezing; taken inwardly, it works by urine, and is esteemed a remedy for the jaundice.

Hogs Fennel.

THIS plant has several other English names, such as *brimstone-wort*, *barestrong*, and *sow fennel*; it has divided leaves, and clusters of yellow flowers, and bears some distant resemblance to fennel. It grows about two feet high; the stalk is round, channelled, hollow, erect, and branched; the divisions of the leaves are much broader than those of fennel, and they are generally threefold; the flowers are small and yellow, but unite to form large clusters, and the seed is oblong and flattish; at the top of the root, a tuft of hairy matter may be always discovered; this is made up of the fibres of decayed leaves, and has a singular appearance. The root is large, long, and of a brown colour, and this part is used medicinally; it is directed to be boiled in water, and the decoction drank night and morning, and is recommended to dissolve tough phlegm, and to relieve the asthma: it operates by urine, promotes the female discharges, and removes obstructions.

Fænugreek.

THIS plant is of the trefoil kind, but somewhat singular in it's manner of growth; it is sometimes cultivated in the fields for the seed, which is said to be emollient. It grows a foot and a half high; the stalks are round, ribbed, and branched; the

leaves are short and broad, and stand three upon every stalk, as in the common trefoils, and are notched about the edges; the flowers are white and small, and resemble a peablossom; the pods are flat, and contain a quantity of yellow seeds, of an irregular figure and offensive smell.

It is recommended to soften, digest, ripen, and disperse tumours, and to relieve pains; and is used in emollient clysters, and to expel wind, either bruised or in a mucilage, in which state it is also said to relieve inflamed or blood-shot eyes.

Male Fern.

THIS is a common dry weed, which grows at the roots of trees, and in dry ditches. It has no flower stalk, but several leaves springing together from the root; and each of these is in itself a distinct plant. It grows two feet high, and sometimes a foot in breadth; the stalk is naked in the lower six or eight inches, and from thence is set on each side with a row of ribs or smaller stalks, each one of which carries a double row of lesser leaves, with an odd one at the end, the whole together making up one great leaf, as in many other plants of this tribe.

The seeds grow on the backs of these smaller leaves in round clusters, appearing brown and dusty; the root is long and thick, and the whole plant emits a disagreeable smell. The root has been recommended for curing the rickets in children, and in powder to destroy worms, and dry up and heal old ulcers; externally applied, the root is said to cure burns.

Female Fern.

THIS weed grows much higher, and spreads more than the last mentioned, and is common on heaths throughout England.

land. It reaches to four or even five feet in height; the stalks are round, smooth, and green; the leaves are set on each side, and are divided into fine parts; and, upon the whole are so much like the male fern, that except for the distance of the ribs it might be considered as one leaf.

The divisions or smaller leaves which go to make up the large one, are oblong, strong, hard, and of a dark colour; and they are so spread, that the whole plant is frequently three feet wide. The seeds stand on the edges of the small leaves, in little clusters, of a dusky appearance, but they are not so common on this as on the male fern; for the propagation of this plant is so effectually provided for by the roots, that the seeds are in a great measure useless: and it may always be observed, that where the roots of plants spread much, the seeds are sparingly produced, and the contrary; Nature having directed the means by which a proportion of every species is to be kept up, and to restrain such an excessive increase as might over-run the earth.

The roots of this plant, fresh gathered, and made into a decoction, are said to be the most effectual destroyers of that long and flat worm in the bowels, which is called the tape-worm, that has ever yet been discovered.

Flowering Fern.

THE principal difference between this and the other fern, is in the manner of its flowering; and even this, when particularly examined, does not seem to be very material. It grows three feet or more high, and the leaves are very regularly and beautifully constructed; they are composed in the manner of the other ferns, each of several small ones, but these are longer and larger than in any of the other kinds, nor are they at all indented on the edges; they are at first of a bluish green colour, and

afterwards turn yellowish; many leaves arise from the same root, but those only bear seeds, which rise about the middle; the seeds stand only on the upper part, and cover the whole, or nearly the whole surface of the leaf, and the little wings turn inwards, and shew their backs rounded up; these are brown, from being covered with the seeds, which are of that colour; and they have so different an appearance from all the rest of the plant, that they are usually called flowers, though they have no more claim to that distinction than the seeds of the other sort. The root is long and very fibrous; the plant grows wild in boggy places, in some particular parts of England, but is not very common.

A decoction of the fresh roots is said to be a good diuretic, and to remove obstructions of the liver and spleen; it is not much used, but it has been known to cure a jaundice, taken in the early stage of the disorder.

Feverfew.

FEVERFEW is a common wild plant, which has divided leaves, and bears a multitude of small flowers like field daisies. It grows about farm yards, and other uncultivated places; the stalk is round, hollow, straight, ribbed and branched, and rises two feet high. The leaves are large, but divided into many small ones, and those are round and indented; they are of a yellowish green colour, and have a particular but rather agreeable smell: the flowers stand scattering about the tops of the stalks, and are small, white round the edges, and yellowish in the middle. The root is white, fibrous, and inconsiderable.

The leaves, flowers, and stalks, may be used; they are best fresh, but preserve some virtue dried. This herb may be given in tea, and is excellent in hysteric complaints; it also destroys worms: the juice of the green plant being expressed and given in
white

white wine, promotes female discharges, and relieves other disorders of that sex; it is useful in a decoction for colds, coughs, and straitness of the breast. It's name bespeaks the virtues formerly attributed to it. The country people make a posset with it, which they esteem a specific against colds and feverish symptoms.

The Fig-Tree.

THIS fruit-tree, though a native of warmer climates, is sufficiently known in our gardens. The trunk is thick and irregular, and the branches, which are numerous, grow equally without any sort of order; the leaves are large, of a very fine appearance, of a dark green colour, divided deeply at the edges, and full of a milky juice; the fruit appears first, and contains the flowers, which expand and form what is called the eye. The *fig-tree* produces fruit twice in the year; the first crop in spring, the second appears towards September, but these seldom arrive at maturity in this country. In Spain, Italy, and some parts of France, they are dried, and are those figs which are sold in the shops here, but they grow larger and ripen better in those climates than in ours.

Our own figs are wholesome fruit, and those which are imported are applied outwardly to swellings with success, softening, promoting suppuration, and procuring ease during the formation of matter; they are also serviceable in coughs, asthmas, and disorders of the lungs. The milk of the green leaves was formerly prescribed as a salutary dressing for bites inflicted by mad animals or venomous reptiles.

Fig Wort.

THIS is a wild plant growing commonly in woods and damp ditches. It is tall, of regular growth, and bears small flowers

of a deep purple colour. It reaches to the length of four feet. But there is also another kind of it which is found in wet places, and this is more properly called *water betony*, and may be distinguished by the round indenting of the leaves, and by growing in or close by water, from the right *fig wort*, which only loves shade and dampness, but not absolute wet. The stalk is square, straight, hollow, and very strong; the leaves stand two at each joint, opposite each other; they are large, broad at the bases, but narrower at the points, and sharply indented; they stand on long foot-stalks, and are shaped like the nettle leaf, but are perfectly smooth, and of a shining colour, which is as often brown as green, as is also the whole plant. The flowers are of very inconsiderable size, and gaping; they are of a very dark purple colour, almost black. The root is long, white, and full of little knobs; it spreads exceedingly under the surface of the earth.

The juice of the fresh-gathered root is said to be an excellent sweetener of the blood, taken in small doses and for a long time together, cleansing the skin from boils, scurf, scabs, and eruptions. The fresh roots, bruised and applied externally, are also reputed to be useful in dispelling scrophulous tumours, and abating the pain, swelling, and inflammation, occasioned by the piles.

The Fir-Tree.

THIS tree grows wild in Germany and many other parts of Europe, but in Great Britain it is only found in gardens and plantations. No kind of fir is a native of this country; that which is called the *Scotch Fir*, being properly a *pine*, and not a *fir*.

Fir-trees grow to a considerable height, with great regularity; the trunk is covered with a rough bark, cracked on the surface, and emitting a resinous smell; the leaves
are

are numerous, and stand in very elegant order on the branches. They are placed in two rows, one opposite to the other; and are of an oblong shape, but somewhat broad and flat. They are of a pale green colour, and of a white cast beneath. From this appearance, the tree is called the silver fir, and from the disposition of the leaves, which resemble in manner of growth the yew-tree, it sometimes takes the name of *yew-tree fir*. The cones stand upright; and, in this kind, are large, long, and brown.

The tops of this fir, are recommended as great sweeteners of the blood, operating powerfully by urine. They may be mixed with other ingredients in diet-drinks, or brewed in the beer which is commonly drank at meals.

The Red Fir-Tree, or Pitch-Tree.

THIS tree arrives at the same size, but is not so regular in it's growth, nor are it's leaves disposed in the same way as the other. The trunk is thick, the bark reddish, and the wood rather more soft than that of other trees of the same species. The branches are numerous, and stand irregularly. The leaves are of an oblong shape, narrow, and sharp-pointed, but they do not grow in two even rows, as in the tree last described; those of the red fir stand irregularly on the twigs. The cones are long, but slender, and hang downwards. The whole tree emits a strong resinous smell.

The tops of this boiled in water, or made into diet-drinks, are recommended in the same cases as the common fir-tree; but as they make a much more nauseous liquor, and do not appear to possess virtues at all superior to the other, this will be seldom used where the other can be procured.

From the fir-tree, pitch, tar, as also the Straßburgh and some other of the turpentine, are obtained; the other kinds being

furnished by the larch and turpentine trees, as will be observed hereafter. To procure the tar and pitch, the wood is piled in heaps, and lighted at the top, and the tar oozes out at the lower parts; and this being boiled, becomes hard, and is the substance which is called pitch.

All the turpentine are in a greater or lesser degree balsamic, and operate to promote urine, but of these we shall treat more at large, under the other trees which produce it. Tar-water was a celebrated and fashionable remedy for some years, and in many cases was unquestionably serviceable; but, like other popular medicines, it was too generally applied, and failing of success in some disorders, it fell into disrepute, and has been very little used for some time past.

Sweet Flag.

THIS common wild plant grows among the flags and rushes, by our ditch sides, and is seldom distinguished from the other sorts. It rises to the height of three feet, but consists only of leaves without any stalk; these are long, narrow, and of a palish green colour; among the leaves, there are generally three or four resembling the rest in all other respects, but that these bear a cluster of flowers, which burst out at one side, within five or six inches of the top; this cluster is long, thick, and brownish, and differing only from the catkin of a filbert-tree in size, this being much the larger; the root is long, flat, and creeping, and is of a strong and rather disagreeable smell when it is fresh, but being dried, it becomes very fragrant and aromatic. That which grows in England is of some value, because we can have it fresh; but the dried root, which is imported from warmer countries, is more fragrant.

The juice of the fresh root, is recommended

ed to promote the female periodical discharges, working by urine moderately, and not being offensive to the stomach. The dried root is cordial and perspirative, warms the stomach, and is said to be useful in removing the effects of indigestions, and feverish disorders.

Common Acorus, or Yellow Flag.

THIS flag grows by the side of every river and ditch, and is distinguished by long leaves of a bluish green colour, and large yellow flowers, resembling in shape those of the iris or flower de luce. The yellow flag sometimes grows three or four feet high: the stalk is a little flattened, though rather inclined to roundness, of a pale green, very straight, firm, and not branched. Two or three shoots only rise from the bosom of the leaves, which are from one foot to two in length, narrow, flat, and sharp at the edges; at the summits of the stalks, stand the flowers, which are large and beautiful. These are followed by numerous seeds, which are contained in large vessels of a triangular form. The root is creeping, and is the only part used medicinally; this has been confounded with the root of the sweet flag, but is called by way of distinction, *false* or *bastard flag*, and is not at all like the others in shape, colour, or qualities. The root of this plant is of a reddish brown, without smell, and of a very harsh taste. It is reputed to be highly astringent, and is directed to be taken up in spring and dried, and afterwards given in powder, to restrain fluxes and overflowings of the periodical discharges.

Flax.

THIS plant is equally beautiful and useful, and is cultivated as well for the seeds, as the stalks. It grows three

feet high; the stalk is round and slender, but firm and erect; the leaves are small, of an oblong form, and narrow, and stand irregularly on it, but are extremely numerous. Towards the top, the stalk divides into several short branches; sometimes three, or four, and sometimes more; and these bear the flowers, which are large, and of an elegant blue colour. Each of them is succeeded by a round seed-vessel, containing a number of seeds.

This is the seed which is called linseed, and which is applied to many medicinal uses. A tea made of it, is serviceable in coughs, and all complaints of the breast and lungs; bruised, or reduced to flour, it makes excellent cataplasms and poultices for swellings, and to assist suppuration. The oil which is drawn from it, is given successfully in pleurifies, and peripneumonies, and is also recommended as an admirable medicine in the gravel and stone.

Purging Flax.

THIS little herb grows abundantly in hilly pastures, and in parks, warrens, and other undisturbed grounds, in different parts of England. It does not exceed eight inches in height; the stalk is round and strong, and divides at the top into many small branches. The leaves are small, oblong, wide, and obtuse at the points, and stand two at each joint. The flowers are of inconsiderable size, and white; the whole plant has much the appearance of the species of chickweed, but is distinguished by the seed vessel, and seed, to be altogether of the flax kind. The root is small and fibrous.

The leaves and stalks of this boiled in ale, make a strong but not unsafe purge; the country people conceive, that it relieves rheumatic pains, and many other obstinate disorders. It has also the reputation of being a remedy for dropsies; and

may probably be found useful in all cases where a strong and smart purge is required.

Fleabane.

THIS plant is commonly found about damp places, it grows to the height of two feet; the stalk is round and straight, very substantial and strong, and frequently of a reddish colour. The leaves are very numerous, standing irregularly; they are not much more than an inch long, of moderate breadth, rough on the surface, and of a whitish green colour. The flowers, which blow in autumn, stand at the tops of the branches; they are larger than a shilling, yellow, and composed of many narrow leaves. The whole plant smells rather offensively.

There is also another kind of *fleabane*, which is smaller, and has globous flowers; and it has been frequently disputed, whether this, or that we have described, possesses the greater virtues, but the latter is generally allowed to be superior. The juice of this plant, is said to cure the itch, applied externally; and the whole herb has the reputation of destroying or driving away fleas, from which quality it has received the name it bears.

Fleawort.

THIS herb is a native of France, and though of no great beauty, is kept in gardens in England. It is about a foot high; the stalks are feeble, greenish, and somewhat hairy. The leaves stand two, or sometimes more, at every joint; they are long, very narrow, and a little hairy, as well as the stalks: from the bosoms of these leaves, rise long naked stalks, on which stand spikes of small flowers, somewhat resembling the spikes of plantain, only that these are shorter. Each flower is succeeded by two seeds, which are smooth,

blackish, and of the shape of fleas; from which circumstance it takes the name. Each head bears many flowers. A mucilage made of the seed is said to cool the throat in fevers.

Flix Weed.

THIS plant grows wild about waste places and farm yards, and is made more conspicuous by it's leaves than by it's flower. It rises to the height of two feet, and the stalk is round, straight, very substantial and strong, and not much branched; the leaves are of moderate size, and very elegantly divided into numerous small parts, each of which is long and narrow; these leaves stand irregularly on the stalks. The flowers are very small, and of a yellow colour, and grow in a kind of spikes at the tops of the stalks; they are succeeded by short seed pods. The stems and leaves are of a dark green colour.

The seeds are used in medicine, and are directed to be gathered just as they are ripe, and boiled whole. The decoction is said to cure the bloody flux, and to be excellent against the overflowings of the monthly discharges.

Flower Gentle.

WE do not know that this plant is found in a wild state in Great Britain, but there are many kinds of it in our gardens; that used in medicine is the largest sort, with a drooping purple spike. It grows three or four feet high. The stalk is strong, round, and channelled; sometimes green, but oftener red. The leaves are oblong, broad, not indented at the edges, but pointed at the extremities: they are very large; and, as well as the stalks, are often tinged with red. The flowers are of a purple colour, growing in long and beautiful spikes dropping downwards.

These flowers are medicinally used: they are

are directed to be gathered before they are full blown, and dried; and are given in powder, as an astringent, to restrain violent purgings and overflowings of the periodical discharges; a decoction may be made of the flowers, which will answer nearly the same purposes.

Flower de Luce.

THIS is also a common flower in gardens. The plant grows near a yard high; the leaves being about a foot and a half long, narrow, flat, and in all respects resembling the leaves of the common yellow flag, like which they are also of a bluish green. The stalks are round, or a little flat, thick, strong, straight, and of a more perfect green than the leaves; the flowers are large, and of a violet blue; the root spreads near the surface, and is large, of a brownish colour, and jointed or divided by rings.

If the juice of the fresh roots of this plant is mixed with white wine, it makes a strong purge, and sometimes also acts as an emetic, but this effect does not render it injurious. It is prescribed as a cure for dropfies; and some physicians, both ancient and modern, are of opinion that it is extremely serviceable in that disease.

Florentine Flower de Luce.

THIS is likewise a garden plant, but is not found there so frequently as the former, from which it scarce differs in any other respect than that the flowers of this are white; the root spreads in the same manner, and the leaves are of the flag kind; the stalks are nearly of the same height, and the flowers as large as those of the blue kind; and both are perfectly of the same form.

But the root of this kind is fragrant

when dried, and is kept in the shops as a remedy for disorders of the lungs, coughs, hoarsenesses, and all the disagreeable symptoms attending colds; it also promotes the periodical discharges.

Fluelline.

THIS plant is common in corn fields, and bears a beautiful though rather small flower; the stalks are seldom more than five or six inches long, so feeble that they trail upon the ground, and somewhat hairy; the leaves are also hairy, small, round, and not placed in any regular form. The flowers are variegated with bright and beautiful purple and yellow; they have heels behind, and stand upon little hairy foot-stalks, which rise from the bottoms of the leaves.

Another kind bears leaves which have two ears at their base, but is in all other respects the same, and possesses the like virtues as that first described; the juice of either, expressed and given in water, or a tea or decoction made of the leaves and stalks, is said to be cooling and astringent, and on these accounts is given in fluxes, and overflowings of the female evacuations.

Fools Stones.

THIS plant appears in great beauty in our meadows and pastures in the month of June. It does not grow above ten inches high; the leaves are about six inches in length, and three quarters of an inch in width, of a very dark green, with large and irregular spots of black in different parts; the stalk is round, stout, erect, and fleshy, and is seldom clothed with more than two or three smaller leaves of the same figure as those from the root; at the top are the flowers, in spikes of an inch or an inch and a half long; they are not of any considerable size, and differ in shape from the generality

rality of flowers; they are of a deep and shining purple colour, though they are sometimes white. The whole plant is full of juice; the root consists of two round bulbs or lumps, which are white and full of a slimy juice.

The root only is used in medicine. It is conceived to be a strengthener, taken internally, but this opinion does not appear to be well supported. Applied externally, in poultices and cataplasms, it is excellent to reduce hard swellings; there are a great many other kinds of this plant in the meadows of England, but this only is used; the root which is sold in the shops by the name of salep, is brought from Turkey, and is the root of a plant of the same kind. This has been found by experience to be strengthening and restorative, and serviceable in consumptive cases, and for decayed or broken constitutions.

Fox Glove.

THIS wild plant of great beauty, grows also in pastures, and about wood sides, in many parts of England. It rises to the height of three feet. The leaves are long and broad, rough on the surface, pointed at the ends, and finely indented round the edges. The stalks are round, strong, firm, and erect; and of a whitish colour. The flowers droop from the stalk in a kind of spike; and are hollow, red, and large, but somewhat spotted with white, and resemble in shape the extremity of the finger of a glove.

Some strong and hardy country people venture on a decoction of the leaves, in water or ale, for the rheumatism, and other stubborn complaints of the like kind; but it works so strongly upwards and downwards, and if taken in too large quantities occasions such violent symptoms, that it should be used with extreme caution; yet, under proper regulation, it is said to cure, also,

quartan agues, and even the falling-sickness. An ointment is made of the flowers of *fox glove*, in May butter, which was formerly a famous application to sores and ulcers of the scrophulous kind.

French Mercury.

THIS plant sometimes, but not very frequently is found wild in England. It is remarkable for little, besides it's bearing male flowers on some of the plants, and female flowers on others, in the same manner as spinage, hemp, and some others, as will be more fully explained hereafter. *French Mercury* grows ten inches high; the stalks are angular, green, thick, but not strong, nor are they perfectly upright; the leaves are of an oblong form, broad in the middle, sharp at the point, finely indented at the edges, and of a dark green colour. The female plants produce only two seeds, which grow together at the top of a small spike. The male plants have only a spike of dusty flowers, which are neither followed by seeds or fruit. But the female plant is commonly mistaken for the male, and the contrary.

A decoction of the leaves and stems of the plant, fresh gathered, purges gently, but works principally by urine; it is said to be cooling, and serviceable to persons of hot or over-full constitutions. The dried herb made into a decoction, is sometimes used in emollient clysters.

Frog Bit.

THIS plant has been by many writers considered as a kind of water-lily; because it hath round leaves, and floats upon the water, but it is of totally a distinct species: and duck weed might with equal propriety be called a water-lily, because that also has round leaves, and floats upon the water.

The

The leaves of *frog bit*, are of a round figure, and a dusky deep green colour: they expand to the breadth of a crown-piece, and rise many together in a tuft, from the same part of the stalk. This stalk extends itself just beneath the surface of the water, and from it descend roots, which do not reach the bottom, but are suspended in the water, in the same manner as the fibres of duck weed. The flowers stand singly upon slender foot stalks; and are white, and composed each of three leaves, which produce a singular appearance.

The fresh leaves are used as poultices or cataplasms to swellings or inflammations, and are said to be very cooling.

Fumitory.

THIS plant grows wild, and is commonly found in the corn-fields. It is about ten inches high. The stalk is round, channelled, of a palish green, moderately thick, but not very strong or perfectly upright. The leaves are large, of a faint green colour, with a bluish cast: they are divided into a vast number of small parts, which are blunt, and round at the ends. The flowers, which appear in the month of June, are small and purple: they have a heel behind, and stand together in numbers in a kind of spike. The whole plant has but little taste.

The juice expressed from the leaves and stalks of this plant, is said to be an excellent remedy for the scurvy; to remove obstructions of the internal parts; and to cure the jaundice, dropfy, and other diseases which are occasioned by obstructions. The juice or decoction of the leaves and stalks of this plant, is also recommended in hectic fevers, pleurifies, and peripneumonies; and it has the reputation of clearing the skin from eruptions, and in a gargle, of drying up and cleansing ulcers in the mouth.

The Furze Bush.

THIS wild bush, which grows on every heath and mountain in Great-Britain, and is in some parts of the kingdom called *gorze*, is too common to need much description. The stem is large, tough, and of a whitish colour, overspread with fragments of an irregular appearance. The branches are very numerous, and spread in such a way, that when the plant is not cut or cramped in room, it forms a kind of globular or semi-globular tuft upon the ground. But there is another sort which grows in close brakes, and rises to a very considerable height; differing only from this in that particular, and in having one large stem divided into branches at some distance from the root. The thorns are very numerous, and very sharply pointed, standing as it were one upon another. The leaves are small and narrow, of a pale green colour; and they fall off so quickly, that it is without any for a considerable part of the year. The flowers are extremely beautiful, and of a bright yellow colour; it produces a great quantity of seeds, which are contained in pods. The root spreads amazingly; and when the shrub has once thoroughly fixed itself in any place, it is not easily extirpated; the smallest piece of it left in the ground, will produce a new plant.

Both the root and seeds are used medicinally, but neither of them are in much reputation. The seeds dried and powdered are reputed to be astringent, and may be used to answer that intention among other things of the like quality. The bark of the root fresh taken up, and given in infusion, is said to work by urine, and to be a remedy for the gravel; but there does not seem to be any good proof that it is very efficacious: it loses its virtue when it is dried.

Garlic.

THIS plant is kept in our gardens for the double purposes of medicine and the kitchen. It grows two feet or two feet and a half high. It has broad and long leaves, of a full green colour. The stalk is round, smooth, strong, erect, and of a pale blue or whitish colour. The flowers are also white and small, taken distinctly; but they grow together, and form a large tuft at the summit of the stalk. The root is white, or sometimes reddish on the external coat; it is composed of a number of bulbs, or (as they are more commonly called) cloves, joined together, and covered with one common skin: the root is fibrous at the bottom. The whole plant has an exceeding strong smell, and a very pungent and acrid taste.

The root, boiled in water, and the decoction reduced into the form of a syrup with honey, is recommended as an excellent remedy in asthmas, hoarseness, coughs, and in all the usual effects of colds, as well as in difficulties of breathing. It is also an exceeding good diuretic.

Gentian.

THIS plant is a native of Germany, but is commonly kept in our gardens. It grows to the height of two feet and a half. Those leaves which rise from the root, are of an oblong shape, broad, of a green colour inclining to yellow, and pointed at the ends. The stalk is thick, strong, erect, and of a brownish yellow colour: two leaves stand at every joint, which resemble the others, but are smaller; and as the stems rise, a number of flowers spring also from every joint; these are small, of a yellow colour, having each a large lump in the middle, which is the foundation of the

seed-vessel, and has a great quantity of yellow threads about it. The root is large, long, and divided into many parts. It is brown on the outside, and yellowish within, and very bitter to the taste.

The root is used in medicine; and is kept dry in the druggists shops, and constantly used in every modern prescription, as a stomachic bitter. The common bitter tinctures and infusions, are only composed of *gentian root* and the peel of Seville oranges. Besides strengthening the stomach, and creating an appetite, gentian root is said to remove obstructions, and to be useful in most chronic disorders; the powder of gentian is a remedy for agues, in common with other bitters.

Germander.

THIS plant is also naturally of foreign growth, but is kept in our gardens. It sometimes grows a foot or more in height, but seldom stands perfectly upright. The stalks are green, square, and somewhat hairy. The leaves, which stand two at each joint, are oblong, very deeply indented at the edges, of a solid or fleshy substance, smooth and green on the upper surface, but hairy beneath. The flowers, which appear in July, are small and of a purple colour, resembling those of the little dead nettle: they stand in clusters round the higher joints of the stalks.

Germander has been celebrated for many virtues. In particular, it is said to be excellent against the gout and rheumatism; however that be, it promotes urine and perspiration, is serviceable in the removal of all obstructions of the internals, in suppressions of the female discharges, and in fevers, scurvy, jaundice, and dropsy; it is also said to be an antidote against poisons. The expressed juice of the leaves and stalks seems to be the best form in which it can be given, though

though it is more commonly administered in decoction or infusion.

Water Germander.

THIS plant grows wild in some parts of England, and is also frequently kept in gardens for it's medicinal virtues. The stalks are square, of a dusky green, hairy, and so feeble that they seldom rise much from the ground; they are eight or ten inches long. The leaves are broad, but short; and indented about the edges, but not sharply or deeply, as those of the germander last described: they are soft and woolly to the appearance and touch, and of a dull deep green colour. The flowers, which are extremely small, are red, and stand in little bunches at the upper joints of the stalks. The whole plant emits a strong and unpleasant smell.

The roots, stem, and leaves of this plant, may be used fresh or dried; it has been celebrated greatly as a perspirative, and for it's virtues against pestilential fevers, and all kinds of contagious diseases; a decoction of it was formerly used as an antidote to poison, and for bites and stings of mad or noxious animals or reptiles, and was also said to relieve violent pains in the side or stomach; it is a principal ingredient in the composition of the well-known medicine which is called in the shops *diascordium*.

Gladwin.

THIS is a wild plant of the iris kind, less remarkable for beauty than for it's virtues. The root creeps near the surface of the ground, like that of the common flower de luce. The leaves grow to a foot in length, narrow, pointed at the extremities, and of a high and somewhat unpleasant smell. The stalks are round, strong, erect, and of a bluish green colour. The

flowers resemble those of the common flower de luce already described, only that they are smaller, and of a more dull colour. There is a little dash of purple in the upper part of the flower, and some veins and streaks of the same tinge in the lower part of it; the rest is of a dull dead hue, somewhat between grey and brown, and the flowers are of a faint and bad smell.

The juice of the root is prescribed to promote urine, and the female discharges. The dried root, powdered or in an infusion, is said to produce good effects in all hystERIC and hypochondriac disorders, faintings, fixed pains in the breast, and shortness of breath; taken inwardly, and externally applied, it has proved, as it is said, an excellent remedy for scrophulous swellings; and it is reputed to be gently astringent after it has mildly operated by stool.

Goats Beard.

THIS plant is of the natural growth of the meadows of England, where it is distinguished by it's narrow leaves, of a lively green colour, and the long leaves of the cup which holds the yellow flowers. It reaches a foot and a half in height; the leaves, as before mentioned, are very narrow, broadest at the base, and smaller all the way to the point. The stalk is round, large, strong, very erect, and towards the top divides into two, three, or more branches. The flowers rise from the extremities of the stalks; they are of a pale beautiful yellow colour, of considerable size, and are surrounded by the cup, which is composed of long and narrow green leaves, which, during that part of the day in which the sun is high, are closed over it, so that it appears to be only in bud. The seeds are winged with a fine white down, resembling that of dandelion, and like that also they stand when ripe upon the tops of the branches, in a round head. The root is long, slender, and white; and, as well as the

the whole plant, full of a milky juice, which being exposed for some time to the air, changes to a yellow hue, and becomes as thick as cream.

The root, which is the medicinal part, is so pleasant to the taste, that it may be eaten at table as well as carrots or other roots, and it is superior to them all in good qualities. It has the reputation of being an admirable restorative, and peculiarly serviceable to persons who have laboured under any long illness; for this purpose, it should be taken as food, which may be prepared by boiling it first in water, then cutting it to pieces, and boiling it again in milk, which may be rendered palatable in the usual way; and thus it is said to become, a most nourishing and excellent medicine. The distilled water from these roots has been also recommended for internal imposthumes, pleurisy, spasms, and fixed pains in the side, disorders of the breast, and internal parts; and for the stone and gravel.

Goats Rue.

THIS tall plant, is a native of Italy, but grows in the gardens of Great Britain; it rises to the height of three feet. The stalks are round, channelled, hollow, rather weak, and of a palish green colour; they are very much branched, but not altogether upright. The leaves are long, and of proportionable breadth; and each of them is composed of several pairs of lesser leaves, with an odd one at the end: these smaller leaves are of an oblong shape, narrow, of a green colour inclining to yellow, thin, and even at the edges. The flowers are but small, and of a pale blue colour; numbers stand upon the same foot-stalk, in a drooping position.

The stalks, leaves, and roots of this plant, are medicinal. It is directed to be gathered just as it comes to flower, and

being dried, and given in infusion, is said to promote gentle perspiration, and to be serviceable in fevers. Many other virtues are ascribed to this plant; those we have mentioned seem to be well attested.

Golden Rod.

THIS plant is commonly found wild upon heaths, in different parts of England. It grows two feet high, the stalk is strong, upright, round, and somewhat hairy. The leaves are long, broad in the middle, but narrower at the bases and extremities; they are indented at the edges, rough and hairy on the surface, and of a full green colour. The flowers, which are produced in autumn, are small, of a fine yellow colour, and growing many together in thick and short spikes, they make a beautiful appearance. The root, which is long, is covered with a brown bark, and as well as the stem, leaves, and flowers, is of a harsh taste.

The root is directed to be taken up in the spring; and, being dried, and powdered, is said to be an excellent medicine, to restrain violent purgings, and for overflowings of the monthly discharges, bloody stools, or any other internal hæmorrhage. The whole plant has been long celebrated, as a vulnerary or wound herb; and has been given in decoctions, both in cases of inward injuries, and in obstructions in any of the intestinal parts.

Gold of Pleasure.

THIS elegant plant is common in many parts of England, and may be distinguished by an unusual quantity of seed-vessels. It rises to the height of two feet. The stalk is round, large, strong, erect, and towards the top divides into a number of branches, all standing upright. The leaves, which are not very numerous, are placed irregularly;

irregularly; they are long, not exceedingly broad, and of a light green colour: they are indented at the edges, and surround the lower part of the stalk. The flowers are small, and white. The seed vessels are round and short, and in such numbers as to form a kind of spikes, from near the bottom to the tops of the branches, on which a few flowers still remain in bloom, after they are withered from the stems.

An infusion of the fresh tops of the plant, before it has seeded, sweetened with honey, is recommended as an excellent remedy for sore throats, and ulcers in the mouth. A considerable quantity of oil may be expressed from the seeds, which is pleasant and well tasted; but we do not know that it has ever been applied to any medicinal uses, though it may probably possess some very valuable qualities.

Gooseberry.

THE shrub which bears this fruit, is too well known to require a very particular description. It seldom exceeds four or five feet in height, except it is trained against a wall, in which case it rises much higher: the woody parts are covered with a brown rough bark, but the young shoots are of a lively green; the leaves are of a full green colour, and beautiful form, being deeply and regularly indented, so as to make three, five, or seven divisions. The flowers are of a whitish green, and these are succeeded by green, red, or amber-coloured berries. The whole stem and branches are armed with strong and sharp thorns.

The green berries boiled in water, are said to be cooling in fevers, to create an appetite, and to check purgings and hæmorrhages; but they must be used for these purposes with caution: the ripe fruit is recommended as more wholesome than most others which are produced in our gardens.

The Gourd.

THIS is a plant of the melon or cucumber kind, but much larger, which is cultivated in gardens. The stalks run to the length of ten or twelve feet, and are large, angular, and hairy, but so weak that they are unable to support themselves upright, and either trail upon the ground, or climb upon other plants or trees. The leaves, which are of a very large size, both in length and breadth, are indented deeply: they are rough, and of a blackish green. The flowers are large, bell-shaped, white, and covered with a kind of down, though not so universally on the outer, as on the inner surface.

The fruit grows large, is covered with a hard firm shell, which contains within a fleshy and juicy substance. The seeds, which are flat, oblong, and hard, grow in the manner of those of melons, and are the only part used medicinally: they are cooling and diuretic; and, possessing these qualities in much the same degree as the seeds of cucumbers and melons, are used with them in cooling emulsions.

The Bitter Gourd, called Bitter Apple.

THOUGH this plant is a native of warm countries, yet it thrives well enough here in the gardens of the curious. It is a small kind of *gourd*. The stalks, like those above described, are large, angular, and hairy, but these are of a pale green. The stalks of this plant can no more support themselves than those of the gourd, but have a number of tendrils, by which they lay hold of every thing that grows near them. The leaves are of considerable size, and very deeply indented or divided at the edges. The blossoms also resemble those of the melon, being large, and of a pale yellow. The fruit is a round

gourd, of the size of a large orange. The bark of this fruit is hard, and contains a spongy substance, with flat, hard, and oval seeds among it.

The internal part of this fruit is imported and sold as a drug, under the name of *coloquintida*: the outer shell is taken off, and the dried pulp, with the seeds among it, is sent to England; but the seeds must be separated afterwards, and the pulp used alone. It operates very violently as a purge, but it may be safely administered under proper caution, and is said to be an excellent remedy for the rheumatism, and for violent habitual head-aches.

Perhaps, if some of these rougher medicines were given in obstinate cases, where the constitution is robust, they might effect cures which are beyond the reach of more gentle and lenient means.

Gout Wort.

THIS wild plant is well known, to the annoyance of the gardener, some grounds being over-run with it, and when it has once taken root it is not easily extirpated. It grows to the height of two feet. The leaves which rise immediately from the roots are of considerable size, and are composed each of several smaller, which are placed on a divided rib, like those of angelica, to the leaves of which plant they are not wholly unlike: they are of a light green colour, oblong, and indented at the edges. The stalks are round, straight, and somewhat branched, slender, channelled, and of nearly the same colour as the leaves; which, on the stalks, are smaller, and consist of fewer parts, than those that spring from the root. The flowers are white and small, but stand together in little round clusters: each flower is succeeded by two flat seeds. The root is creeping and fibrous.

The virtues of this plant are only in external use; the root and fresh buds of it being applied in fomentations and poultices to ease obstinate pains. The name it has obtained, denotes the reputation it once bore for singular efficacy against the pains of the gout; but modern experience has taught us to decline every external remedy for that disorder, though warm applications of this kind, may be of all others the least dangerous. Good effects have been produced by poultices of the roots and leaves boiled soft together, and applied to the hip in the sciatica, and renewing it as it grew cold. Nor is this the only kind of pain in which it may be used with success; such as are occasioned by old strains and bruises, may be effectually removed by it.

Gromwel.

THIS wild plant is less distinguished by its beauty, than by its seeds, which are hard, shining, and resemble pearls, as they stand in the open husk. The plant reaches the height of a yard. The stalk is round, large, strong, and perfectly straight, but divides into branches. The leaves are of an oblong shape, not broad, but very rough and hairy, and of a deep green colour, almost inclining to black: they stand in no regular form. The flowers are white, and of inconsiderable size; when they fall off, the cups remain, and contain the seeds we have already described. The plant grows commonly in dry ditches, and about hedge sides.

The seeds are most useful in medicine: they operate powerfully by urine, and are said to be serviceable in the gravel, and other obstructions. They may be given in powder, and the patient should dilute with frequent draughts of barley water at the same time. When the seeds cannot be had, the juice or decoction of the leaves may be substituted.

Ground

Ground Pine.

THIS is a small wild plant, of a mossy and singular appearance. It does not grow above four inches high. The stalks are hairy, and seldom erect. The leaves stand so thick on the stalks, two opposite each other, that together with the young shoots which grow from their bosoms, the stalk is in a manner obscured, and the whole seems a thick round tuft. The leaves are short, narrow, and divided into three parts at their ends. The flowers are small, of a yellow colour, and grow at the joints among the leaves: these flowers are each succeeded by four seeds; and the whole plant emits a finell highly resinous. It is found in fallow fields and chalky grounds, and is very common in Kent. It flowers in June and July.

The whole plant may be used in medicine, either dry, in powder, or in infusion. It operates strongly by urine, and promotes the discharge of the female evacuations so powerfully, as to be dangerous to pregnant women. It removes obstructions of the liver and spleen, and is said to be useful in the palsy, gout, jaundice, rheumatism, pains in the limbs, and many other chronic disorders. It is also reputed to be a good nervous medicine, and to be an antidote to the scurvy.

Groundsel.

THIS weed grows commonly in gardens, fields, and upon walls, and bears small yellow flowers and downy seeds; it does not often grow above eight inches high; the stalk is round, fleshy, tolerably straight, and green or reddish; the leaves are oblong, remarkably broad at the bases, blunt, and deeply indented at the edges. The flowers grow in a kind of long cups, at the tops of the stalks and branches. It flowers through all the milder months of the year.

The juice of this herb, taken in ale, is esteemed a gentle and very good emetic, bringing on vomiting without any great irritation or pain. It assists pains in the stomach, evacuates phlegm, cures the jaundice, and destroys worms. Applied externally, it is said to cleanse the skin of foul eruptions.

The Guaiacum Tree.

THIS tree is a native of the West-Indies, where it grows to a great bulk; it thrives well in plantations in England, though it does not arrive at any very considerable size. The fruit is large, and the branches numerous; the leaves are but small, though each of them is composed of two or three pair of still smaller ones, with no odd leaf at the end. The leaves are short, broad, round, and of a dull green colour. The flowers are small and yellow, growing in large clusters together; so that the tree, when in bloom, makes a very fine appearance: but it seldom produces flowers in these climates. The stem is covered with a hard brown brittle bark; that of the branches is of a lighter colour: the wood is firm and ponderous; and, as well as the bark, of a hot and aromatic taste.

The bark and wood are used medicinally, they are given in decoction, to promote perspiration, and to cleanse the blood. It is an excellent remedy against the rheumatism, gout, dropsy, king's evil, scurvy, venereal complaints, and all other disorders, which arise from what is commonly called foulness of the blood; but it must be persevered in for a considerable time, as it's good effects will not be produced suddenly.

Gum Guaiacum is the resin drawn from this tree; it is black, shining, and brittle, and when powdered, of a greenish white colour, of an aromatic smell, and an acrid and pungent taste. It sometimes purges; and, in the rheumatism, and many other cases,

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is to be preferred to the wood itself. This gum is also recommended to cure the scurvy, and to cleanse the skin of scabby eruptions.

Hares Ears.

THOUGH this plant grows wild in some parts of Europe, it is only to be found here in gardens. It grows to the height of two feet or more. The leaves are of considerable size, long, broad, of a stiff substance, and somewhat drawn together into a hollow, which gives them the appearance of that ear from which they are named; they are of a very pale green colour, and the ribs upon them stand high above the surfaces. There is another sort with narrow leaves, which was formerly used in medicine as well as the broad-leaved kind: the stalks of this latter are round, upright, channelled, and towards the top divided into branches. The flowers are small, of a yellow colour, and stand at the extremities of the branches, in small tufts. The root is long, large, and fibrous.

In the countries where this plant grows wild, the young shoots of those leaves which rise from the root, are esteemed efficacious in the cure of fresh wounds; two or three of these being cut off close to the ground, are laid unbruised, one over the other, upon the wound, the lips of it being first closed, making a kind of compress. These are bound on with linen rags, and suffered to remain for two or three days; at the end of which time, in most cases, the cure is perfected, and the scar only remains. Though this herb has always been reckoned among the vulnerary plants; yet it is not improbable that the cure in this way depends more on closing the wound, and excluding the air, than on any particular virtue in the plant; as the same thing happens daily in this country, where the leaves of tutfon, and other innocent plants, are applied in the same way

with equal success. The cure of the king's evil, and other ulcers and sores, was formerly ascribed to this herb, which was also esteemed an antidote against poisonous bites, and a remedy for internal bruises and ruptures.

Hares Foot.

THIS little plant is frequently found wild in fallow grounds, and among corn, it is singular on account of the downy pods or tufts which contain the seeds, and from whence the name is derived.

It seldom rises high; the stalks, which are numerous, round, and small, generally creeping on the ground; they are, however, divided into many branches. The leaves are small, of an oblong shape, narrow, hairy, and of a faint green colour; they grow three together, in the manner of trefoil, and are set at every joint. The flowers, which are small, are of a pale purple colour, and stand several together in a spike of no great length.

The stalks and leaves of this plant, dried and made into a strong decoction, are said to be admirably astringent, and particularly useful in all kinds of fluxes, whether attended with a discharge of blood or not; the decoction is also recommended to check the overflowings of the usual female discharges, as well as those occasioned by weakness. It is serviceable in ulcers of the bladder, and in retention of urine, difficulty, heat, and pain in making water.

Harts Tongue.

THIS plant grows wild, in shady lanes, and about stone buildings, and remains green the whole year. It is of the fern kind; like them, having only leaves without flower-stalks, and bearing the flowers and seeds on the back of the leaves: but this

this is the only resemblance it bears to the ferns, we have described. Many leaves, each of which appears to be a separate plant, rise from the same root. The foot-stalk of the leaf is four or five inches long, but the extreme breadth of it seldom much exceeds an inch, being widest at the base, and growing narrower towards the extremity: this leaf is sometimes entire, but in other instances is divided into two parts towards the point; the upper surface of the leaf is of a lively green, the under part somewhat more pale, and the foot-stalk passes quite through the leaf like a rib. The seed grows in broad oblique lines on each side of this rib, on the under surface, and is small, dusty, and brown.

This plant is commonly used for disorders of the liver and spleen, and for the rickets in children. It is prescribed as a good astringent to stop the bloody flux, and to restrain the spitting of blood; it is also recommended to relieve such as are troubled with convulsive or hysteric fits, or with the palpitation of the heart. But for any of these complaints, it should be persevered in a proper time; and may either be given in powder or decoction of the dried plant, or in tea, infusion, or juice of the fresh leaves.

Hartwort.

THOUGH this is a native of the Alps and mountains of Italy, yet it is frequently met with in our gardens. It rises to the height of a man; and the stalk is large, channelled and hollow: the leaves which encompass, and as it were sheath the stem, are of considerable size, and are divided into several parts, every one of which is again commonly subdivided into five different shreds, each terminating with three smaller leaves oval and pointed; the whole leaves are of a faded green, inclining to yellow. The flowers, which are white,

taken singly, are of small size, but are collected together in large tufts or clusters on the tops of the several branches. Each of the flowers is succeeded by two large and long seeds, channelled on the back, and having a brown leafy border on each side. These seeds are acrid and pungent to the taste, and emit a strong smell.

Both the leaves, stalks, and seeds, are used medicinally, but chiefly the latter; they act as a warm cordial, relieving colic and windy pains, and promoting the female periodical evacuations, and those after childbirth; they operate principally by urine, and may be given in powder, decoction, or infusion. These seeds compose a part of the numerous ingredients of Mithridate and Theriaca.

Hawthorn.

THIS shrub or tree, for it sometimes grows to a very considerable magnitude, is too common to require a very particular description. The trunk is irregular, and generally crooked; it has many tough branches set alternately with very sharp thorns, and leaves, on opposite sides of the twigs. The leaves are of a glossy green, and are divided into three or five parts. The flowers are small, consisting of five white leaves, with reddish threads in the middle, and grow in clusters. It is extremely beautiful, and the smell of it is delightful. These flowers are succeeded by small round berries of a fine red colour, containing a large stone divided into two parts, and but thinly covered with pulp. This shrub flowers in May, and the blossoms are from thence called *May Flowers*; the berries ripen in September, but hang till after Christmas, if they are not devoured by the birds.

Both the flowers and dried fruit are used medicinally, either in decoction or infusion: they both possess the same virtues, and are

esteemed good diuretics: they are commonly given in the gravel and stone, but no great dependence can be placed on their single efficacy; they are also recommended in pleurifies.

Hawkweed.

THIS plant grows commonly in the fields and meadows, and flowers in the summer months. The root strikes deep into the earth, and is long, thick, and very little branched or divided; the leaves lie flat on the ground round the root, and are rough and somewhat hairy, obtuse at the extremities, and deeply indented, or divided into several parts. The stalks are tall, tough, and branched, and bear several flowers at the tops resembling those of dandelion, but smaller; they are also of a yellow colour, and like them turn into down when the flowers wither, and cover long and slender seeds.

This plant is in so many respects like the dandelion, that it is generally supposed to be of the same kind, and to possess nearly the same opening, diuretic, and cooling qualities.

Hedge Mustard.

THIS plant grows every where by the way side, and upon old banks, hedges, and walls. The stalk rises to be a foot and a half, or two feet high; and is round, tough, and pliant, in general not straight, but branching out in a great variety of divisions, like a bush or shrub. The leaves which grow on the lower part of the stem are long and narrow, and divided into several jagged shreds set opposite to each other, with one at the end more obtuse than the others. As the stalk rises, the leaves have fewer divisions, sometimes only three. The flowers are small, being composed of only four leaves, and of a yellow

colour; as they are set on each side the stalk, and flower gradually as the spike shoots up, so the stalk is frequently seen full of seed-pods on the lower part, and of flowers at the top. These seed-vessels are round, sharp-pointed, stand close to the stalk, and contain a great number of small hot and pungent seeds.

An infusion of the whole plant is recommended in complaints which affect the breast, such as asthma, oppression of tough phlegm, cough, and hoarseness, a strong infusion of it may be boiled to a syrup, in which way it's virtues will be preserved through the year.

Hemlock.

THIS weed has always been esteemed a deadly poison, till within a very few years that an ingenious foreign physician introduced the internal use of it, since which time it has acquired some degree of reputation.

It is a tall handsome plant, frequently rising to the height of four or five feet. It has smooth, round, and hollow stalks, marked with large black or purple spots, and bears many large winged leaves which are subdivided into numerous smaller parts like fern, but finer. On the tops of the branches grow large clusters of white flowers, each consisting of five leaves, and these flowers are succeeded by whitish seed deeply channelled. The root is large and woody. It grows in old deserted gardens, under hedges, and among rubbish, and flowers in the middle of summer; the whole plant smells offensively.

Hemlock has been anciently prescribed in poultices to disperse hard swellings; but the moderns, as we have before observed, have ventured upon the internal use of it. It has been asserted to be specific in the cure of cancers and scrophulous disorders, and treatises have been written on it's virtues, in

in support of which many ample testimonies have been adduced.

The dried leaves are directed to be powdered, and given at first in very small quantities, which are to be increased as the patient can bear it: large doses at the beginning are apt to occasion faintings, giddiness, stupefaction, and even loss of intellects.

Hemp.

THIS plant sometimes grows to the height of five or six feet. The stalk is stout, angular, and covered with a thick tough bark, for which it is principally cultivated. The leaves are numerous and large, being composed of six or seven smaller ones, which spread like the fingers of the human hand, and are long, narrow, sharp-pointed, finely indented about the edges, and are rough to the touch, and green above, but white or hoary underneath. The flowers and seeds are produced by different plants: that which bears the flowers, which are scarce observable, producing no seeds; and the female, or seed-bearing plant having no flowers. The seed is large, round, smooth, of a greyish white colour, and containing a white oily pulp.

The seeds only are used medicinally. These being made into an emulsion, or boiled with milk till they crack, are said to be a cure for the jaundice, and to relieve old and obstinate coughs; this emulsion has also been recommended to wash the face after the small-pox, to efface the marks, and the oil expressed from the seeds is said to be a cure for burns.

Hemp Agrimony.

THIS plant grows by rivers, and in other watery places. The root is spreading, stringy, and fibrous; and the stalks, which sometimes rise near three feet high, are angular, of a reddish colour, and

somewhat woolly: at each joint stand two leaves, divided into long, narrow, indented parts, resembling hemp; like which, also, the leaves are green above, and white beneath. The flowers are of a bright red colour, and grow in large clusters at the tops of the branches, which are composed of a great number of small, slender, naked flowers, divided into five parts at the tops, and each succeeded by a downy seed.

A decoction made of the root, boiled in ale, and taken in small quantities, is said to act as a gentle purgative; but in large doses it operates more violently by stool, and by vomit also, though without producing any bad effect; it has the reputation of being a cure for dropsies, of affording relief in coughs and catarrhs, and of correcting bad habits of body. It is esteemed a good vulnerary herb, and is said to cure both external and internal wounds.

Black Henbane.

COMMON *black henbane* is found near the highway sides, and on the banks of ditches and other undisturbed places in most parts of the kingdom. It grows to the height of two or three feet, and has thick, large, round hairy stalks, clammy to the touch, and of crooked and unshapely growth. The stalks are thick set with large and long leaves, which are soft, hairy, and clammy, sharp-pointed at the ends, finely indented at the edges, and of that green colour which has a bluish cast: these leaves are of a very disagreeable smell, and render the hands offensive after touching them. The flowers, which are bell-shaped, and of a yellowish brown colour, veined with purple, and having purple chives in the middle, grow several together on the tops of the branches, the flower-stalk continuing to rise as they blow. The stalk is extended to a considerable length, the seed-vessels standing under each other in different

rent progressive stages to maturity. The flowers are succeeded by many small flat brown seeds. The root is rather long and thick, and not so disagreeably scented as the leaves.

The seed only is used internally, and this is given in small quantities in bloody fluxes, and other internal hæmorrhages, though seldom alone, being generally made into an electuary with conserve of roses; and sometimes with the addition of white poppy seeds.

But the leaves of this *henbane* are commonly applied externally, as an emollient, cooling, and anodyne poultice; in which way they are useful to check inflammations, as well as in an ointment made with lard. A vulgar notion prevails, that pieces of the root strung like beads, and hung round children's necks, assist them in breeding their teeth easily. The root is in a degree poisonous, and is never used internally.

White Henbane.

THE *white henbane* is a native of warmer climates, being found wild in Italy, and some parts of Germany; but with us is only to be met with in gardens.

It differs principally from the common *black henbane*, in being of smaller size and less woolly; in the leaves being broader, but shorter, and less jagged or indented; standing on longer foot-stalks, and not being altogether so offensive to the smell. This plant also bears fewer flowers, and these are inferior in size to those of *black henbane*, and are of a pale yellow colour without the purple veins. The seeds are also of a lighter colour.

The seeds of this species of *henbane*, are generally directed to be used for the same complaints as the other, because they are supposed to be more mild in their operation; though it is probable no very ill consequences have ever happened from

administering the seeds of the common *henbane*, instead of those of the white; which, as they are much more easily obtained, has no doubt frequently happened.

Good Henry, Good King Henry, or English Mercury.

THIS has obtained the latter name, to distinguish it from *French Mercury*, which has been already described, and to which it is allied.

This plant grows in waste places, about farm yards, and among rubbish. It seldom exceeds a foot in height. The stalk is round and large, but seldom straight; it is covered with a kind of glutinous or unctuous powder, of a greyish colour. The leaves, which stand upon long footstalks, are of a triangular shape, pointed like spinnage, of a pale or rather faded green on the upper surface, but covered beneath with the same kind of greasy matter as the stalks; the leaves which grow on the stalk differ only in size from the others; the flowers, which appear in the spring, grow on long spikes at the tops of the branches, are of a yellowish green, and are succeeded by round, black, and shining seeds.

The young shoots of this plant, before it flowers, are recommended to be eaten as spinnage or asparagus, and in this way are said to be opening, cooling, and cleansing; it operates also by urine, and is esteemed a remedy for the scurvy. A cataplasm of the leaves was formerly prescribed to abate gouty pains; but, as we have already observed, external applications have long been disused in that disorder; a decoction, however, is still made of the dried leaves for clysters.

Holyoak or Hollybock.

THIS is a very tall flower, growing frequently in our gardens to the height of seven or eight feet. The stalk is thick, rough,

rough, round, and straight. The leaves large, indented, rough, and somewhat hairy. The flowers, which in the single sort are composed of one leaf divided into five parts, are of different colours, (red, white, purple, and pale yellow) on different plants. The root, which is large, white, and branched, is full of a slimy juice, and not very disagreeable to the taste.

This is a mallow, possessing nearly the same virtues as the common and marsh mallow, which will be mentioned hereafter: but not in the same degree as either; being more powerful than the former, and less efficacious than the latter.

Honeysort.

THIS plant grows wild in many parts of the kingdom, and is found in corn-fields, and other dry places. The root is long, and white within: a few leaves, seldom exceeding half a dozen in number, spring from it in the early part of the year, and spread themselves regularly on the surface of the ground round the root. These leaves are from six to eight inches long, but the breadth is little more than one fourth part of the length: each leaf is composed of a double row of smaller ones, placed on each side a rib, and terminated by a single leaf; these smaller leaves are also oblong, of breadth proportioned to the length, and elegantly indented at the edges; they are of a lively green colour, and the whole plant is so beautifully formed and disposed, that it is not easily mistaken for any other. All the leaves die away in the summer; towards the close of which, a round, hollow, straight stalk, shoots up from the root, which branches towards the top, and bears leaves somewhat resembling those which spring from the root, but without the divisions into smaller ones. On the tops of the branches grow small white flowers, each of which is succeeded by two small seeds flat and channelled.

The fresh leaves beat into a poultice, and applied to hard, inflamed, and troublesome swellings, are said to cool and disperse them: they must be frequently renewed. They have also had the reputation of dispelling scrophulous tumours, but we cannot speak of their efficacy in this particular from our own knowledge.

Honey Suckle.

THIS beautiful shrub adorns the woods and hedges of every part of the kingdom. The trunk or stem seldom or ever exceeds the bigness of a man's wrist. The branches are slender and pliant, laying hold of any other plant that grows near it, and twisting themselves round it's limbs. The young shoots are brittle, and of a reddish colour. The leaves grow in pairs at the joints, and are broad and roundish, but somewhat pointed at the extremities, and of a dull green with a bluish cast. The flowers grow in bunches, composed of long slender tubes of a pale reddish colour, and of delicious smell; these are succeeded by round red berries.

A decoction of the leaves is recommended for coughs and asthmatic complaints, to remove obstructions of the liver and spleen, and as a gargle for a sore mouth and throat; and an oil collected from a strong infusion of the flowers, is said to relieve the cramp and nervous convulsions.

Honey Wort.

THOUGH this plant is a native of the warmer parts of Europe, it is frequently cultivated in our gardens.

When the stems are supported, this plant grows to the height of two feet, but in these climates it is too feeble to rear it's head without assistance. The stalk is of moderate size, round, full of juice, and brittle.

brittle. The leaves are of considerable bigness, of an oblong shape, and so broad at the base, as to surround and inclose the stalk; they are of a faint or bluish green colour, and are thick set with small and sharp prickles, and the whole surfaces of them are blotched or spotted in an irregular manner, with white. Among the clusters of leaves at the tops of the branches, grow the flowers, which are of a yellow colour, streaked with purple towards the middle, and of an oblong shape, hollow, wide, and open at the mouths. At the bottom of each of these flowers is a drop of liquor of a honey-like taste, from which circumstance the name is derived.

An infusion of the fresh tops of this plant, is recommended as a remedy for the jaundice and scurvy, being of a cooling nature, and operating chiefly by urine.

Hops.

THESE plants, which grow wild on the hedges in many parts of Great-Britain, and are also much cultivated, run to a very considerable height, climbing round trees and shrubs in the former state; and in the latter, round poles placed on purpose for their support. The stalks are round, sometimes green, and sometimes inclining to purple; hairy, and rough to the touch. They bear leaves shaped like those of the vine, divided into three parts, and each finely indented at the edges, of a deep green colour, and nearly as rough as the stalks. At the extremities of the stalks grow the hops, in large, loose, and scaly bunches, of a pale and greenish yellow colour, when they are at maturity, at which time also they emit a strong and grateful scent.

A decoction of hops fresh from the plant, has been recommended to cure the jaundice, and the powder of them, after they have been dried in an oven, is said to be of great

use in agues. A pillow filled with hops is reported to allay the frenzy occasioned by fevers, and to procure sleep, and they are also prescribed to remove obstructions, and promote the female periodical discharges.

The young shoots, or as they are commonly called hop-tops, eaten as asparagus, are accounted extremely wholesome, being gently opening, diuretic, and cleansing.

White Horehound.

THIS plant, grows by the sides of roads, in lanes, and other dry places in many parts of the kingdom. It rises to the height of fifteen or sixteen inches. The stalks are square, white, or hoary, and very strong, of a pale colour, and erect. The leaves, which stand two at each joint, and have pretty broad foot-stalks, are short and wide, obtuse at the ends, and indented at the edges; they are rugged, white, and hoary like the stalks. The flowers grow among the leaves, are white, and the points of their cups prickly; they appear in June. The root is woody, hard, and fibrous.

The parts of the plant used for medicinal purposes, are the leaves and the tops of the young shoots: a very strong decoction of these, made into a thin syrup with honey or sugar, is said to be excellent in relieving coughs, hoarsenesses of long standing, and disorders of the lungs; and taken in more considerable doses, promotes the female periodical discharges, removes obstructions, and is particularly serviceable in dropfies, jaundice, and green sickness.

Black Horehound.

THIS plant, from it's disagreeable smell, is called by some *stinking horehound*. It is a taller plant than the white horehound, and more branched. The stalks are square, and hairy; and bear leaves larger than those of the white horehound, in

in shape not unlike them, but of a darker colour, and somewhat more soft to the touch. The flowers grow among the leaves in two clusters, one on each side the stalk, each cluster having a common foot-stalk; the flowers are red. The whole plant is of a disagreeable appearance. The root is fibrous, and spreads much. This also grows by road sides, and under dry hedges, and flowers in July.

The plant may be used fresh, or dried. The leaves bruised and mixed with salt, are said to cure wounds inflicted by mad animals; given in form of tea, it is recommended to promote the female evacuations; and as a remedy in hysteric cases, faintings, convulsions, and low spiritedness, and all the train of hypochondriac disorders.

Horsetail.

THIS common and wild plant, of which there are several sorts, is frequently found in our corn-fields, and appears to be composed of branches only without leaves. It grows to the height of a foot or more, and is much branched; the stalk is round, neatly channelled, and composed of many joints. It is hollow, feeble, and can seldom support itself tolerably upright; each joint is set or articulated into that next under it, and these stalks are surrounded at every joint, with a great number of long, slender rough leaves, which are jointed one within another like the stalks, and stand so thick that the whole stalk appears like a horse's tail.

The whole plant is of a green colour, and emits a disagreeable smell when bruised. It is found also in ditches and marshy grounds.

Every part of this plant may be used, and it is best fresh; though it retains a great part of it's virtue in a dried state: it may be given in decoction, to stop overflowings of the periodical discharges, and other internal hæmorrhages; applied externally, it immediately stops the bleeding of wounds, and

heals them; and it has been given with success in ulcerations of the kidneys or bladder.

Hounds Tongue.

THIS plant is common in hedges, and by way sides, it is said to have received it's name from the particularity of it's smell, which has been supposed to resemble that of a kennel of hounds. It grows to the height of two feet and a half, or three feet. The stalk is angular, strong, and erect. The leaves which spring from the root are a foot long, and two or three inches broad, of a pale whitish or bluish green colour, soft and woolly to the touch, sharp at the points, and not indented at the edges; those on the stalks answer the same description, but are smaller. The flowers are small, and of a dark purple colour, or rather a dull red; they grow several together at the tops of the branches, appear in July, and are followed by rough seeds.

The root is used in medicine: it is long, large, and of a brownish colour without, but white within; it is said to be balsamic, and astringent. Taken in decoction, it is recommended to allay coughs arising from sharp humours; dried and powdered, it is prescribed to stop violent purgings, and the overflowing of the female discharges. It is also reputed to be a good vulnerary herb, and to possess virtue in dispelling scrophulous tumours, in which case it may be applied externally, and a decoction of it taken at the same time.

Great Houseleek.

THIS plant is so well known by it's peculiar manner as well as the place of it's growth, that it needs little description. It grows in clusters of a roundish figure, and these are composed of leaves, large towards the bottom, and smaller towards the extremities; they are thick and very full of juice, broad at the bases, growing sharp

sharp towards the points, flat on the upper surface, a little rounded beneath, and rather hairy at their edges. The stalk rises to the height of ten inches, is very large, straight, round, and juicy; of a reddish colour, and divided at the top into branches: the leaves on it are more thin and narrow than those from the root. The flowers are numerous, and grow in spikes on the tops of the branches; they are of a starry appearance, of a red colour, and have a green head in their middle, which afterwards forms a cluster of seed-vessels, inclosing a number of very small seeds. It grows on the tops of houses in most parts of England.

The leaves are used medicinally. They may be applied externally in inflammations, burns, scalds, St. Anthony's fire, and the shingles. They are also useful in other cases where cooling things may be employed. The juice is said to be cooling and astringent taken inwardly, though it is not often used in this way. It is likewise recommended for inflammations of the eyes.

There is also another *houseleek* unlike the last mentioned in form, but possessing nearly the same virtues; this plant is distinguished from the other, by the name of the *lesser houseleek*; the stalks are round, slender, and reddish, and do not grow above six inches high. The leaves are long and round, not flat like other leaves. The flower stalks are of a bluish green colour, and have a few leaves like those already described. The flowers are white, and stand in tufts or umbels at the tops of the stalks. This also grows on old walls, and the tops of houses, like the greater.

The Least House Leek, Stonecrop, or Wall Pepper.

THIS plant, which also grows commonly on old walls, is of kin to the two preceding, but differs from both in appearance and

virtues. The root is small, from whence grow abundance of round stalks: being weak and unable to support themselves, they spread every way about, and extend to the length of six inches. The greatest part of the stalk is covered with leaves, so that it has the appearance of a green substance, about the size of a man's little finger; these leaves are short and thick, of a lively green colour, broad at the bases, and sharp at the points. The flowers are small, and of a bright yellow; they grow in great numbers at the extremities of the branches, and resemble in shape those of common houseleek. It flowers in May and June. The root is small and fibrous, and the whole plant is of an acrid pungent taste.

This kind of *houseleek* is more apt to increase than lessen inflammations; it should therefore be carefully distinguished from the other sorts: but the juice of this is excellent against the scurvy, and other diseases arising from what is called foulness of blood. A course of it has also been recommended for the king's evil. It may be taken in strong decoction.

Hyssop.

THIS plant, though not of British growth, is kept in gardens for its virtues. It sometimes grows two feet high: the young stalks are square, strong, erect, and of a pale green colour; as they grow older they become round and woody. The leaves, which stand two at each joint, are long, narrow, pointed at the ends, and of a lively green colour. The flowers are small, and stand in long spikes at the extremities of the branches; they are of a beautiful blue colour. The root is thick, woody, and much divided; and the whole plant has a strong aromatic smell.

Hyssop may be gathered and dried when it is just beginning to flower. An infusion or tea made of it, is not disagreeable; and this

this seems the best way of taking it. It is an excellent remedy for coughs, hoarseness, asthmas, obstructions in the breast, difficulty of breathing, colds, and distempers of the lungs. A strong infusion boiled into a syrup with honey or sugar, will answer the same purposes, and may be administered with an equal quantity of oil of almond.

Hedge Hyssop.

THIS little plant is kept in our gardens, but is a native of the Alps, and other mountainous parts of the continent of Europe. It grows a foot high; and has creeping roots, from whence rise square, slender, and not very stout stalks: the leaves, which resemble those of common hyssop, and are set at every joint, are long, narrow, and sharp-pointed. The flowers are long, of moderate size, and a yellow colour; they grow from the bosoms of the leaves, on short foot-stalks, and are hollow and but little divided at the ends. They resemble in some measure the flowers of *fox-glove*.

The plant is but little used in this country, though a decoction of it fresh is said to be an excellent but somewhat violent purge, and is recommended to strong constitutions in dropries, rheumatisms, and the jaundice.

Jack by the Hedge, or Sauce alone.

THIS is an annual plant, which perishes every year; but makes a figure in the spring, and is common in our hedges. The root is small, white, and woody; the stalks rise to the height of three feet, and are slender, channelled, hairy, and very straight. The leaves, which stand on long foot-stalks, are large, broad, short, and roundish; and those which grow on the stalk somewhat pointed at the extremities, and waved at the edges. They are of a

pale yellow green colour, thin and slender, and being bruised, smell like onions or garlic. The flowers, which stand ten or a dozen together at the tops of the branches, are small and white, consisting each of four leaves; these are followed by slender pods, containing small longish seeds. It is found in hedges, and on bank sides, and flowers in May.

The leaves are of a hot nature, and being eaten as sallad, operate powerfully by urine, and are recommended in dropries. The juice of the leaves, boiled into a syrup with honey or sugar, is prescribed to break tough phlegm, and to cure old coughs and hoarsenesses. It is also said to be an antidote against poisonous and contagious diseases; and the leaves, bruised and applied externally, are reputed to resist the spreading of mortification and gangrene.

The Jacinth, Hyacinth, Harebell, or Blue-bell.

THESE flowers are found in immense quantities in old grounds, among low woods, and in thickets, in every part of England. The root is white, round, and bulbous, and about the size of a large filbert. The leaves are narrow and grassy, but of a dark green colour, and smooth surface: among the leaves rises a long, smooth, brittle, round stalk, without leaves, and bearing a spike containing six or seven flowers, which are large and of a beautiful blue; hollow, oblong, and turning up at the rim. The whole spike hangs down its head.

The root, which is the only part used, and this but rarely, in medicine, abounds in a slimy juice, but must be carefully dried; the decoction of it operates well by urine, and the powder is balsamic and somewhat styptic. Its virtues are not much known; but it is said to possess also an astringent quality, and to be a good remedy for female weaknesses.

Jessamine.

THIS beautiful shrub ornaments almost every garden. It shoots out long, slender, and green twigs, unable to support themselves; so that it is commonly nailed against walls, unless it is confined to a very small size. The trunk is covered with a grey bark, but the young shoots are green. The leaves stand two at each joint, opposite to each other, and are extremely beautiful; each being made up of about three pair of small, narrow, oblong, and pointed leaves, with one at the end longer than the rest; they are of a dark but clear green colour. The flowers come forth among the leaves several together, on a common foot-stalk, they are long, hollow, open at the end, and white; they stand in very small cups, so that they easily fall off when they are full blown: they are highly and deliciously fragrant. These flowers are succeeded by divided berries; which ripen in the warmer countries, but seldom come to maturity here.

The flowers are used medicinally; and a strong infusion may be made, by pouring a pint of boiling water upon six ounces of the fresh gathered and clean-picked blossoms of *jessamine*; after it has stood twelve hours, it may be poured off, and honey or sugar enough added to make the liquor into a thick syrup: in this way, it is said to be an excellent medicine for a cough and difficulty of breathing, and a strong decoction has been recommended to warm and relax the womb, and facilitate childbirth.

Jews Ears.

THIS is a fungus, or as it is more commonly called a toad-stool, which grows upon old elder-trees. It is about an inch and a half in length, and generally

about an inch broad, and is conceived to have somewhat of the shape of a human ear. It adheres by a broad base to the bark of the tree, and from thence gradually spreads into a flat, hollow substance, with several ridges in it, running irregularly; it's colour is a pale grey on the outside, and darker within, and there run several ribs along it. Dried, and boiled in milk, it has been strongly recommended in swellings and inflammations of the throat, and in quinies. The *Jews-ear* has at present lost it's reputation; but that seems owing to sophistication, another fungus being sold under the name of it, which grows to a great magnitude, overspreading decayed trees in damp places. The Covent Garden market is said to be supplied from the water-pipes at the New River Head, Islington, but such amazing quantities of it are produced in every part of the kingdom, that those who chuse to impose on the public, will be at no loss to find it.

St. John's Wort.

THIS plant is common in pasture-grounds and hedges, among bushes, and in other dry places. It is a stout plant, growing to the height of a foot and half. The stalk, which is round, strong, large, and exceedingly erect, is very much divided into branches towards the top. The leaves, two of which grow without foot-stalks, at every joint, are short and blunt at the points, and have three pretty large veins running on the back side of each; they are of a bright green colour, and upon being held up against the light, seem to be full of small holes like those made by a pin. The flowers, which are large, and of a bright and beautiful yellow, are very numerous on the tops of the branches: they are full of yellow threads, which if rubbed between the fingers emit a blood-like juice. The seed-vessel is longish, and angular, somewhat

what resembling a grain of barley; this is divided into three parts, each of which contain several very small brown seeds: it smells resinous.

The flowers and the flowery tops of the plant, just before they begin to ripen for seed, are used medicinally. A tincture of the former, in spirits of wine, is said to be a remedy for madness and melancholy: and a decoction of the latter, which works powerfully by urine, is prescribed for the gravel, and in ulcerations of the urinary passages; it is also recommended to cure agues, and destroy worms. Externally used, the flowers and tops may be gathered fresh, and bruised; and in this way are good for bruises, and wounds: in the former they take off the blackness; and, in the latter, stop the blood, and serve as a healing balsam.

The White Stock July Flower.

THIS is a strong plant, kept in gardens for it's flowers, which are variegated and doubled by cultivation. It grows to the height of two or three feet. The stalk is strong, large, round, and of a grey colour. The leaves are long, narrow, somewhat hairy, and whitish. The stalks from which the flowers immediately blow, are of a whitish green, and tender. The flowers are nearly the size of a shilling, beautifully white, and of a delicious smell. The seed is flat and round, and grows in long hoary pods, divided in the middle by a long partition.

The flowers are sometimes used in medicine, though not often; they are to be fresh gathered, as soon as they blow. An infusion of them is said to be a serviceable lotion for ulcers and chops in the fundament; and is also prescribed internally, to promote the female discharges. It operates by urine. An ointment may be made by boiling them in hogs lard, which

is highly recommended for excoriations, and in particular for sore nipples.

The Juniper Shrub.

THIS shrub is commonly found on heaths, in several parts of England. It is here generally low, but in some other parts of Europe, and particularly in Norway, it rises to a considerable large tree. The bark is of a brown colour, inclinable to red. The branches are tough, and thick set with longish very narrow and stiff leaves, pointed and prickly at the ends, and of a bluish green colour. The flowers, which are of a yellowish colour, and full of threads, are small and inconsiderable. The berries are round, green the first year, and when ripe of a dark purple or black, and each of them contains three cornered seeds: they are of a strong and rather disagreeable smell, and of a sweetish resinous taste.

The wood, berries, and gum, are used medicinally; the two latter are generally imported from Germany. The wood is said to be of use, burnt in times of prevailing contagions or pestilential diseases: the gum has been burnt upon coals, and the fume received up the nostrils, by such as are troubled with catarrhs, or defluxions in the eyes and nose. The berries dispel wind, and work by urine; and are particularly recommended in those colic pains, which are occasioned by gravel and stone. These also make the true geneva; but the liquor commonly drank under that name, is only malt spirit, to which oil of turpentine is added, to give it the taste of juniper-berries.

Ivy.

THIS very common shrub climbs about old trees, or upon old buildings, insinuating itself by short fibres into trees or walls;

walls; and for want of such support, it sometimes runs on the ground; it rarely bears any fruit in that situation. The trunk is large, brown, and covered with a bark of peculiar roughness. It is divided into a great number of branches, which are slender and brittle. The leaves, which are dark green, are of various shapes, oblong, angular, pointed or divided. But it has been observed, that the leaves of those plants which have the support of a wall, are more uniform, being generally round, and ending in one point. The flowers, which grow in little round clusters, are of a yellowish colour, but small and inconsiderable; the berries which succeed them are large, black when they are ripe, and contain each several angular seeds. It flowers late in the year, and the berries do not ripen till towards the end of January.

Both the leaves and berries are sometimes used, but neither are in very great reputation. A decoction of the former is said to destroy vermin in children's heads, and to heal the soreness they occasion. The leaves are also used to cover issues that are inclined to inflammation. The berries are purging; and may be taken in an infusion, which will also sometimes work by vomit, but not prejudicially. They are prescribed as a remedy for rheumatisms, and pains of all kinds in the limbs; and the infusion is said to have cured dropfies, but this is probably somewhat doubtful.

In the warm countries the *ivy* emits a kind of gum, which has been used externally to take out spots and freckles from the skin, but it should be applied with caution, as it is of a caustic nature, and may excoriate the skin.

Kidney Wort, or Navel Wort.

THIS plant grows on old stone walls and buildings in some parts of England. It is seldom above eight inches

high, and is remarkable for a cluster of round leaves growing about the stalk. The root is thick and knobbed, and has many fibres growing from the bottom. The leaves, which are thick, fleshy, and indented at the edges, stand on long and stout foot-stalks, which, except in those that spring immediately from the root are inserted not at the edges of the leaf, but in the middle. The stalk which bears the flowers is also large and round, and towards the top, divided into several branches, on which the flowers, which are oblong, hollow, and of a greenish white colour, grow in spikes; each flower is succeeded by two little horned vessels, full of male seeds.

The leaves are used medicinally; and applied externally, are cooling, and afford relief in violent pains. Being bruised, they are used in the piles with great success. The juice of them taken internally, operates by urine, and is reputed to remove stranguries, and give relief in the gravel, and inflammations of the liver and other intestines.

Knap Weed.

THIS is a common wild plant. It grows two feet high. The stalks are round, but ribbed: of a palish colour, very strong and erect, and divided towards the top into branches. The leaves, which are dark-coloured, are of equal length and breadth; those which stand upon the stalk are however still broader. The flowers large, of a purple colour, and standing in scaly heads, appear like thistles; and one of these is placed at the top of every branch: though these flowers may be thought to resemble thistles at first sight, yet on examination they will be found to be more like *blue-bottles*.

The whole young plant is used in medicine fresh. It is recommended in decoction to stop the bleeding of the piles, and to restrain bloody

bloody purgings and other internal hæmorrhages. A slight infusion is prescribed as a gargle for sore throats: and it may be very properly added to decoctions of the various astringent plants which are found wild in Great-Britain; but is not of itself sufficiently efficacious to be depended on without other help.

Knot Grass.

THIS plant is found wild in fields, by way sides, and in hedges. There are several kinds of it, but the form and virtues of one will include the whole: the largest is the most commonly used. The stalks of this are nine or ten inches long, round, jointed, and of a dark green colour. The leaves are of an oval form, but sharp-pointed, set alternately on short foot-stalks of a bluish green colour, and not indented at the edges. The stalks generally recline upon the ground, and one only proceeds from each joint; from which also rises a small white flower, somewhat tinged with reddish. The seed is single, black, and triangular; the root long, large, and running deep into the ground.

A decoction of this whole plant, including roots, stalks, and leaves, is recommended as a very good astringent; and is reputed to be useful in stopping all kinds of bleedings, whether internal or external, and in particular, against the bleeding piles, and the overflowing of the monthly discharges. It is also said to be a very serviceable wash for inflamed and bloodshot eyes.

Ladies Mantle, or Bears Foot.

THIS little plant is a native of some parts of England, but is not very commonly found in a wild state. The leaves, upon their first springing up from the root, are plaited or folded together, from which

circumstance it has its name: as they expand, they are broad and of a roundish figure, but indented deeply into eight parts, and each of those is again more finely and elegantly indented about the edges. These leaves are of a whitish green colour, covered with a fine down, and nearly as broad as the palm of a man's hand. They stand upon foot-stalks of an inch or two long. The flower stalks grow from the midst, and are round, somewhat hairy, about eight inches long, seldom upright, and of a pale green colour. The leaves on these stalks are smaller, and have shorter foot-stalks than those which spring from the roots. The flowers which grow in clusters at the tops of the stalks, are small, and of a greenish colour. They are composed of eight leaves each, and have many yellow threads in the middle. The root is long, large, of a dark colour externally, and has many fibres. It flowers in May, but is seldom found near London.

The root and leaves are both valuable; a decoction of the former, fresh taken up, is said to be an excellent remedy for the overflowings of the monthly evacuations, for bloody fluxes, and other internal bleedings; and, being dried and powdered, not only answers the same purposes, but is also a remedy against common purgings. The leaves are sometimes applied to women's breasts, to give them firmness, or to restore their forms after they have been swelled with milk.

The Larch Tree.

THIS tree is a native of Italy, the Alps, and the mountains of the Tyrol and Carinthia. It is of a moderate height, and in summer makes a very beautiful appearance; but its leaves fall off in the winter, though it is a tree of the resinous kind, and in many respects resembles the *fir* and *pine*. It is common in most planta-

tions and pleasure-grounds in England. The trunk and branches are covered with a rough bark of a brownish colour, inclined to reddish. The leaves are not much above an inch in length, very slender, and of a bluish green colour; they grow twenty or thirty together, in a round knot, like the brush of a pencil. The flowers, as in other trees of this kind, are scarce perceived. The cones are oval, seldom exceeding the size of a pigeon's egg, with broad and smooth scales.

A decoction hath been made of the fresh buds, to promote urine; but all the virtues of this tree are contained in the utmost perfection in the Venice turpentine, which is produced from it; in order to procure which the lower part of the trunk of the tree is cut to the heart in the heat of summer, and the resin flows out. This turpentine operates powerfully by urine, and is reputed to be an excellent balsam; it is a remedy against the whites, and to stop the discharge which remains after the virulence of a recent venereal taint is removed; but in both these cases it must be administered with caution, as too large quantities of it are apt to heat, and to occasion inflammation.

Larkspur.

THIS flower is well known in our gardens, to which the double and variegated sorts are highly ornamental. It sometimes rises to the height of two feet, or even a yard; but this only in rich soils. The root of the *larkspur* is small, full of fibres, and perishes as soon as the seed is ripened. The leaves are roundish, divided into many long and very fine parts, and of a dark green colour. The stalks are erect and firm, but much divided, bearing leaves like those already described, and on the tops long irregular spikes of flowers, of different colours, blue, red, white, and streaked; the flowers consist of five leaves, and have a spur or heel on the back part of

each; these are succeeded by round sharp-pointed seed-vessels, filled with black, rough, angular seeds.

The leaves of this plant were formerly used as a vulnerary medicine, and a decoction of them is still recommended as useful in the piles; in which disorder they are said to stop the bleeding without producing heat, which is the common effect of many other astringents.

Lavender.

THIS plant is a native of warmer climates, growing wild in the southern parts of France and in Spain; with us it is only cultivated in gardens. It reaches to the height of three feet or more, and lives many years. The trunk or main stem, and the branches, are woody, firm, and covered with a greyish bark; but the young shoots are tender, and green: on these stand the leaves, which are long, narrow, of a light green colour, round, pointed, and broadest at the extremities, and stand two at each joint. The stalks from which the flowers rise, are square, green, and have but few leaves, and those smaller and narrower than the others. The flowers stand in spikes or ears; they are small, of a fine blue colour, and very fragrant: the cups which hold the flowers are whitish. There is also a broad-leaved sort, but this is much more rare.

These flowers are used medicinally: they are cordial and refreshing, useful in the palsy, convulsions, and all disorders of the head and nerves. They are also efficacious in expelling wind from the stomach and bowels, and may be taken in tea or infusion, in which form it is also used in warming and strengthening fomentations. A cordial spirit is also made from these flowers, with other ingredients, which is given in all hypochondriac disorders, and in the palsy.

Lavender.

Lavender Cotton.

THIS is a shrubby plant, growing wild in the warmer climates but planted in our gardens. It is sometimes two feet or more in height. The stem is light grey; and the stalks which grow from it are tough, hard, and of the same colour; these, which are very numerous, bear oblong, white, and hoary leaves, in figure somewhat resembling those of common heath, but these are indented, and of a strong but pleasing smell. The stalks which bear the flowers, are long, round, of a greenish colour, and without leaves, and each bears at it's top a single naked yellow flower, about the size of a sixpence, or rather less. The seed is small, longish, and channelled, and the root firm and woody. It is a perennial, and lasts many years.

Of this plant the leaves are generally used, but sometimes the flowers; they are both best fresh-gathered. An infusion of the leaves in water, is said to destroy worms, and it is a very efficacious though very nauseous medicine; they also promote the female discharges, and remove obstructions of the liver. The leaves and flowers of this plant were formerly recommended as antidotes against poisons, and the bites and stings of venomous reptiles. An infusion of them in wine, is reputed to be a cure for the jaundice.

Spurge Laurel.

THIS little shrub seldom grows above the height of two or three feet. It has a woody stem, about the thickness of a man's finger, covered with a bark of ash-colour; this stem towards the top divides itself into many branches, which are rather slender, and clothed with long, thick, narrow, and very smooth leaves of a glossy green, which stand round the tops of the

branches; among these leaves grow the flowers, which are small, oblong, greenish tubes, with a few yellowish threads in the middle; and these are succeeded by small, round, black berries. It grows in woods and thickets, produces flowers early in the spring, and the berries ripen in autumn. The whole plant is of a hot pungent taste.

The leaves, and even the berries, are sometimes prescribed in dropfies, and are given in a slight infusion; but the operation of this medicine is so violent, both as a purge and emetic, that it ought not to be given without the utmost caution: few constitutions are equal to it's force.

The Leek.

THIS is a garden herb universally known for kitchen uses. It rises to the height of three feet or more. The root is round and white, with a cluster of fibres at the bottom. The leaves are large, long, of considerable breadth, and of a deep shining green colour; these leaves encompass the lower part of the stalk, the upper part of which is naked, and bears at the top a cluster of small flowers of a purplish green. It flowers in June and July. The seed is contained in round pods, one succeeding each flower, and is flat and black.

Leeks are recommended in asthmas, coughs, and shortness of breath, and to cleanse the stomach of tough phlegm. A syrup may be made of a strong infusion of the whole plant, except the fibres; and this is the best way of administering it.

The Lemon Tree.

THIS tree, though a native of warmer climates, is found in the green-houses in England. The trunk is of moderate size, but smaller here than in it's native soil; it is covered with a brownish bark,

bark, and divides into a great number of irregular branches, armed with prickles. The leaves are large, of a handsome oval figure, and a pleasing green, the beauty of which remains during the whole winter. The flowers, which are large, and of a glossy white, are composed of a thick fleshy leaf, and emit a most delicious fragrance. The fruit is of oblong shape, and of a yellow colour peculiar to itself; it has a small prominence at each end, and contains a fine sour juice.

The peel of lemons is used among other ingredients in all bitter preparations for strengthening the stomach, procuring an appetite, and expelling wind. The juice is excellent either fresh or in syrup to acidulate diluting drinks in fevers of all kinds; it is also diuretic, and useful in the stone and gravel. It is an admirable remedy for the sea scurvy; and, mixed with salt of wormwood, is given with success during fermentation, to stop violent and dangerous vomitings.

Leadwort.

THIS little plant, though a native of warmer countries, is to be found in the gardens of Great Britain. It grows about two feet high. The stalks are weak and slender, and are encompassed at the lower parts with long narrow leaves of a faint green colour. The flowers, which are small, and of a dull red, or purple colour, stand in short thick spikes at the tops of the stalks, and each flower is succeeded by a single rough hairy naked seed. The root is large and long, and the whole plant is of an acrid taste.

This root is used for the tooth-ache, which it sometimes cures almost instantaneously; a small piece of it held in the mouth, draws off a quantity of rheum; and in the same way it is said to give sudden and effectual relief in the head-ache; but it must

be cautiously used, for it is extremely hot and biting.

Lentile.

THIS very small pulse is sown in some parts of England, for the sake of the seeds. It sometimes rises to the height of a foot, or even a foot and a half; but the stalks are so feeble, that it seldom stands upright. The stalk is angular, branched towards the top, and of a light green; the leaves resemble those of the common pea; consisting each of several pairs of smaller ones, on a common rib, and the whole is terminated by a tendril instead of an odd leaf. The small leaves are of an oval shape. The flowers are small, white, and in figure like those of tares. They stand singly, on long foot-stalks. The flower is succeeded by a pod of a flattish shape, containing generally two round seeds of the size of a very small tare, but somewhat flattish.

This seed, which is the medicinal part, being reduced to powder, has made poultices for swellings, but it is not in much reputation. The seeds themselves were formerly eaten to stop purgings, and cooling cataplasms have also been made of the flowers: but the use of both seems at present to be omitted.

Lettuce.

THIS plant is so common in our kitchen gardens, that it scarce needs description. It's extreme height, when it flowers, is sometimes two feet and a half. The stalk is round, thick, smooth, very upright, of a light green, and somewhat encompassed by the leaves; which are oblong, broad, but narrower near the stalk, and somewhat indented at the edges. The flowers grow
on

on the tops of the stalks, and are of a faint yellow. The seed, which is flat and whitish, is winged with a light white down.

Lettuces, which compose the best part of our sallads, are grateful to the stomach, allay heat, and quench thirst. The juice of them may be taken to procure sleep, or the thick stalk may be eaten for the same purpose; and perhaps this is more innocent, as it is certainly less offensive than opium. It is said to be diuretic, and to increase the milk of nurses. The seed is one of those which are commonly called the four cold seeds.

Wild Lettuce.

THIS is common in our hedges, and takes it's name from the flowers having some resemblance to those of the *garden lettuce*, though it's manner of growth is different. It rises six or seven feet high. The stalk is large, round, very erect, branched, and of a pale yellow colour, inclining to green. The leaves which grow at the foot of the plant, are very large, being twelve inches long, and four or five broad; they are of a pale green colour: those which grow on the upper part of the stalks are smaller, but they are both deeply indented at the edges; and if either the leaves, the stalk, or any other part of the plant is wounded, a milky juice flows from it, which smells like opium, and has also a hot bitter taste. It has many branches, and the flowers are proportionably numerous; they are small, and of a pale yellow colour.

A syrup made from a strong infusion of this plant is recommended as an excellent anodyne; though it is at present very little used. It is also said to relieve violent pains in colics, and other disorders, and to dispose the sick person to sleep, producing all the good effects of a gentle opiate, and leaving none of the ill consequences of that medicine.

The White Lily.

THIS tall, highly fragrant, and elegant garden plant, grows to the height of four or five feet. The stalk, which is round, green, large, and very erect, is surrounded at the bottom by several long, narrow, thick leaves, and many more grow upon it all the way up, which are of the same shape, smooth, and of a paler green. The top of the stalk is divided, and the flowers stand on the divisions; these are large and white, and have several yellow chives in the middle. The root is bulbous, and composed of many thick scales.

The roots and flowers are used in external applications, the former are excellent, mixed in poultices, to hasten the supuration of abscesses; a cataplasm of the flowers is emollient, and relieves pain: an oil is made of the flowers, by steeping them in common oil of olives, but the fresh-gathered flowers are more efficacious, if they are to be had. The root may be procured fresh at all times.

Lily of the Valley.

THIS small but beautiful and odoriferous plant, seems to have but little pretence, from it's resemblance, to any part of the name of that last mentioned, except that the leaves are of the lily kind. It seldom exceeds six or eight inches in height. The leaves are large in proportion to the size of the plant, long and broad, of a dark green colour, and full of thick ribs or nerves. From the midst of the leaves rises a weak, thin, angular, green stalk, bending towards the top, and bearing a drooping row of small white flowers, roundish, hollow, and of a delicate and refreshing smell; these flowers are succeeded by small round berries, which turn red as they ripen.

Of these flowers a tea is made, which being drank for a considerable length of time, is serviceable in all nervous complaints, whether violent and obstinate head-aches, apoplexies, epilepsies, palsies, convulsions, tremblings, giddiness, or swimings in the head. And though it may not be alone powerful enough to cure these disorders, in their worst states; yet if it answers the purpose of alleviating the symptoms, that is too desirable an object to be neglected, especially where the experiment can be made on such cheap and easy terms.

The Water Lily.

THIS is that large and elegant plant, the broad leaves of which are seen floating upon the surface of the water, in brooks and ponds which communicate with rivers or streams; and in the autumn, large white flowers are commonly observed among them. The root of this plant is long and large, and lies buried in the mud. The stalks are round, large, and of a spongy consistence, with a white pith in the middle; and the leaves, one only of which grows on each stalk, are also thick, and juicy or spongy, they are of a round form, and lie flat upon the surface of the water. The flowers blow upon single foot-stalks, which rise, like those of the leaves, immediately from the root; and, like them, are light, round, glossy, and pithy. The flowers are large and white, but have yellow threads in the middle; these are succeeded by a seed-vessel, which is large and round, and contains a number of seeds.

The root is used medicinally, and the best way of administering it is fresh, in a strong decoction. It is recommended as a valuable remedy for the whites, and for the weaknesses consequential to venereal complaints: it also restrains violent purgings, and those in particular which occasion bloody stools. There are several

other kinds of *water-lily*, which are found in ditches; particularly one with a large yellow flower: and the roots of these possess, in a less degree, the same virtues as that which we have described.

The Lime Tree.

THIS tree, which is commonly planted to form avenues in parks and near gentlemen's houses, is very beautiful when in flower, and extremely fragrant. The trunk is large, straight, and covered with a smooth bark, and the branches are tolerably regular. The leaves are short and broad, of a form nearly round, but terminating in a point, and finely indented about the edges. The flowers grow on long yellowish stalks, which shoot out by the leaves, and have some yellow, oblong, and narrow leaves upon them: the flowers are also of a faint yellowish colour, nearly white, and the smell of them is extremely agreeable; they are succeeded by a small round hoary fruit, about the size of a pea. The flowers are used medicinally, and are good for giddinesses of the head, tremblings of the limbs, and almost every kind of nervous disorders. They may be made into a tea; and powerful virtues were formerly attributed to them even in apoplexies, epilepsies, and other violent seizures in the head.

Liquorice.

THIS plant is cultivated in many parts of England for the root. It grows a yard or more high. The stalk is round, channelled, and branched, and set alternately, with rather large and long leaves, each of which is composed of many pairs of smaller, standing on a common rib, and terminating with an odd one. These smaller leaves are of an oval shape, and of a dusky green colour, and feel clammy to the touch. The flowers, which are very small and of a blue colour, stand in long spikes, which rise from the bosoms of the leaves. The seeds

seeds are contained in erect pods. The root is used medicinally, and it possesses many virtues. When it is fresh taken up out of the ground, it has a sweet and rather agreeable taste. It is a good pectoral, and of great use in disorders of the lungs, coughs, hoarsenesses, and shortness of breath. It also operates gently by urine, and is recommended in the stone, gravel, stoppage and heat of urine, and in ulcerations of the kidneys and urinary passages, where it acts as upon the lungs, both in cleansing and healing.

It is taken to most advantage by sucking or chewing the fresh root; but it may be given in infusion, or in tea. The black substance which is sold in the shops, by the names of *liquorice juice* and *Spanish liquorice*, is made by evaporating a strong decoction of this root till it is reduced to a consistence: but the fresh root itself is much more efficacious.

Noble Liverwort or Hepatica.

THIS flower is not a native of Great-Britain, but is commonly kept in our gardens, where it makes a pretty figure in the spring. The leaves which spring immediately from the root are supported each by a single foot-stalk, which is white, thin, and reddish; these leaves are near an inch broad, and of equal length, and are divided each into three equal parts, pointed at the ends, and of a green colour. The flowers precede the leaves, rising early in the spring, before their appearance; these also stand singly on longish foot-stalks, and are of moderate size, consisting of six blue roundish pointed leaves set about a greenish head, with whitish blue chives in the middle. The green head afterwards changes into several small naked seeds. The root is small and fibrous.

An infusion of the leaves of this plant,

is recommended to remove obstructions of the liver and spleen; it operates gently by urine, and is also said to be a good medicine in the jaundice, if it is taken in the early stages of that disease.

Green or Ground Liverwort.

THIS is a common low plant, consisting wholly of small leaves, which spread themselves on the ground, shooting out small fibrous roots on the lower side, by which they adhere to the earth or stones; these leaves are of a fine green colour. It grows on old walls, in wells, and in other moist and shady places; and is by some writers considered as one of the kinds of moss. The leaves are of an oblong shape, blunt and thin; they lie one over another, are somewhat crumpled, and full of small punctures. They frequently spread into clusters, which cover a space of ground a foot or more in diameter. This is the description of the plant in it's usual state; but in spring, when the situation and the weather are favourable, slender stalks spring up among the leaves, on the tops of which are small mushroom-like heads, which are very tender and brittle. These have been sometimes called imperfect flowers.

This plant derives it's name from the virtues it is believed to possess, and which the whole plant is thought to contain. It is best green, and fresh-gathered, and may be given in a strong decoction, to remove obstructions of the liver and other intestines; and operating by urine, it is a good remedy in the dropsy and jaundice. It has been given with success in hectic fevers, and the first stages of consumption, and assists in restraining the whites, and discharges after venereal complaints. It is also used externally to cleanse the skin of foul and scabby eruptions, and the bruised leaves have the reputation of stopping bleedings.

Grey

Grey or Ash-coloured Ground Liverwort.

THIS plant is also very common by our dry wood-sides and other barren places, and in some measure resembles the last described, but differs materially in colour. This, as well as the former, consists wholly of leaves of a grey or ash-colour on the upper surface, but more white beneath. The leaves are two inches long, and about two thirds of that breadth: they grow in clusters together, and are sometimes more and sometimes less distinct; and in the latter case appear larger. No stalks rise from this to bear any kind of flowers or seeds, as in the sorts before-mentioned. In this, the tips of the leaves turn up, and are reddish; and these curled parts contain the seeds. The whole plant appears to be dry and sapless.

This plant has been lately used, and highly celebrated, as a specific against the fatal effects of the bites of mad dogs and other animals. For this purpose it is directed to be mixed with pepper, and the patient is at the same time to bathe in the sea; which latter injunction may probably have occasioned it's seeming success: for though it has been said to cure dogs, it does not appear that it has ever succeeded with a human creature when this terrible disease has been in it's worst state. Musk, opium, and cinabar, are the prescriptions now principally in use, but we have too much reason to apprehend that even these are not to be relied on.

Purple Loofestriife.

THIS is a handsome wild plant, and is found at the sides of ditches and rivers. It rises to the height of three feet, and is very regular in it's growth. The stalk is square, hairy, and frequently inclines to a reddish colour. The leaves, which stand two at each joint, are long and narrow, of

a dusky green, and a little rough, and pretty much resemble those of the willow-tree. The flowers are of a full purple colour, blow in very long spikes at the tops of the stalks, and are of considerable size; the spikes are frequently ten or twelve inches in length: they are succeeded by divided seed-vessels, containing many very small and brown seeds. It flowers during most of the summer months.

The leaves of this plant are said to be a good balsam for fresh wounds, and a cooling and cleansing ointment may be made of them boiled in lard. A water was formerly distilled from it which was recommended for wounded or inflamed eyes, but it is not at this time in any great reputation.

Yellow Loofestriife.

THIS plant is also found wild about watery places, and is remarkable for it's beauty and elegance. It grows four feet high; the stalks are hard, firm, erect, and of very regular growth; they are somewhat hairy, and divided into several branches as they ascend. The leaves are of a yellowish green colour, about the length of a man's finger, and an inch or an inch and a half broad in the middle, growing narrower at each end; these are also rather hairy, and are sometimes set three or four, but commonly only two at a joint. The flowers, which are large, and of a beautiful yellow, stand several together on the tops of the branches. The seed-vessels are round, and divided into two parts, each full of small seeds. The root is long and slender, and creeps along the surface of the earth.

This root is directed to be dried and given in powder, as an astringent, and is said to be serviceable in the whites, in bloody fluxes, overflowings of the female periodical discharges, and violent purgings; it is also equally balsamic. The young leaves may be laid over fresh wounds, which will stop

stop the bleeding, and heal them in a very short time.

Lovage.

THIS is a garden plant, not being found wild in this country. The stalk is round, tall, hollow, and deeply ribbed or channelled. The leaves are of very considerable size, and of that particular sort which are called winged, and are each composed of a number of smaller; these, of this plant are set on a divided stalk, and are short, broad, indented at the edges, and of a deep green colour. The flowers, which grow in clusters at the tops of the stalks, are small and yellow; these are composed of five little leaves, and are succeeded by oblong channelled seed of a brown colour. The root is thick, large, and very much divided, and the fibres from it are numerous, and of a brown colour. It is of a hot, acrid, and aromatic taste and smell.

The fresh roots operate by urine, and are recommended as a good remedy for the jaundice, and the seeds and leaves produce the same effect; they also expel wind. The dried root is a perspirative, and useful in fevers and pestilential diseases.

Tree Lungwort.

THIS is a moss of the largest kind, and in form somewhat resembles the *green* and *grey liverwort*, but is superior in size to either. It is found, but not in great plenty, on the barks of old oaks, and beech trees; in very large woods, it is sometimes met with in great quantities. Each leaf seems to be a separate plant, and is eight or ten inches long, and nearly the same breadth; of a yellowish green colour above, but more inclining to an ash-colour beneath: it is of a substance somewhat resembling leather. The leaf is divided deeply at the edges, rough to appearance and the touch, and

full of high ribs or veins on the surface. At the flowering season, some certain small red heads appear, which contain the seeds to perpetuate the plant.

This plant is said to be an excellent astringent, and is directed to be given in a strong decoction to stop the overflowings of the monthly evacuations, and all other hæmorrhages. It is celebrated as a specific against a spitting of blood, and is commonly given in coughs, consumptions, and complaints of the breast, in syrup or infusion: it is doubtful if it answers any good purpose in these cases. It has also been prescribed for the yellow jaundice, and some advise it to be dried and powdered, but it is undoubtedly better fresh.

The Lupine.

AMONG the various kinds of lupines kept in gardens, the best for medicinal use is that which bears white flowers. This grows to the height of three feet. The stalk is round, large, hairy, and of a pale green colour. The leaves, which are placed on long foot-stalks, are each composed of seven, eight, or nine, long and narrow ones, spread like the fingers on a hand; and these are also of a faint green colour, and are narrow near the stem, and blunt at the extremities. The flowers, which grow in regular spikes at the tops of the branches, are large and white, and resemble a pea-blossom in figure; these are succeeded by large flat hairy pods standing in an erect position. They flower in July, and the seeds ripen in the following month.

The seeds of *lupines* may be made into a decoction in the manner of barley water; which operating by urine, brings down all female discharges, and removes obstructions. It is reputed to be an excellent medicine in the early stages of consumptions, jaundices, and dropies; but it does not appear to be powerful enough to root them

out in their more advanced state. A decoction, made very strong, is recommended to wash the heads of children that have scurf or breakings out upon them, which they cleanse and dispose to heal. It may also be generally used for clearing the skin of scabby eruptions and other foulnesses.

Golden Lungwort.

THIS is a tall, straight, and elegant plant, of the hawkweed kind, bearing yellow flowers, and very hairy leaves; it is very common in the mountainous parts of Europe, and it grows wild in some parts of England, upon old walls, and in very dry situations, but it is not commonly found in this country.

It reaches to the height of two feet; the leaves are large, and of an oblong shape, growing to the number of half a dozen or thereabouts immediately from the root, upon round and thick foot-stalks: these leaves are broad, of a deep green, and sometimes of a purplish colour, and are extremely hairy, the hairs being so long, white, and thick set, that they give it an appearance of woolliness. The stalk is round, and though rather small, tolerably firm and erect, of a purplish colour, and somewhat hairy. The leaves which grow on the stalk are smaller than those from the root, but resemble them in shape, and are in the same manner very hairy. The flowers, which are not of any considerable size, are of a bright and pleasing yellow colour, and have an effect the more striking as the plant itself has so much whiteness about it. The seeds are winged with a white down.

The young leaves, as they spring from the root, are used medicinally. They possess nearly the same qualities as those of coltsfoot, but their virtues are very much superior to those of that plant.

In some parts of the continent of Europe, this plant is more common than in Great

Britain, and there it is constantly used as a pectoral medicine, and is thought highly efficacious in diseases of the lungs, in coughs, asthmas, and the early stages of consumptions. It may be given in the form of a strong infusion, or a decoction; and it might probably be productive of very good consequences, if it was properly tried, in the disorders we have mentioned.

Though it is not plenty in it's wild state, yet it may be easily propagated in gardens, as it produces a considerable quantity of seed, a small portion of which, once sown, would afford a supply which would not be soon exhausted, as it will flourish in the most barren places, and even in the crevices of walls, if it happens to fall there, which would probably be the case, as it is light and downy, and therefore liable to be scattered by the wind.

Madder.

THIS plant does not grow wild in Great Britain, but is cultivated for the sake of it's root, which is used by the dyers, and is about the size of a large goose-quill, round, but much branched; of a colour inclining to red; and, when washed, somewhat transparent. Each branch of the root has a small, hard, and tough string in the middle; it is of a faint sweet taste, and a little bitter. From these roots spring many square, rough, feeble stalks, with joints, at every one of which stand six or eight leaves, disposed in a star fashion, and these are of a dusky green colour, sharp-pointed, broad in the middle, and narrow at both extremities, and so very rough that they seem in a manner prickly. The flowers, which grow in long spikes rising from the bosoms of the leaves, are small and yellow, consisting of one leaf divided into four parts, and are succeeded each by two small moist berries, almost black, each of which contains two round seeds. It flowers in May.

A decoction

A decoction of the fresh roots of *madder*, very powerfully assists in removing obstructions of the liver and spleen, and in the cure of the jaundice and dropsy. It is also recommended as a remedy for the stranguary, gravel, and stone. A poultice of the roots is said to dissolve extravasated blood, and to be useful in wounds and bruises.

English Maidenhair.

THIS little plant is allied to the true *maidenhair*, which is imported from France, and other warmer climates on the continent of Europe; though it may also be found in the western counties of England. It is frequently used instead of it, though not with propriety; as it does not by any means exceed it in virtues, and is much less pleasant. This plant does not grow above eight inches high, and each leaf, as in all others of the fern kind, is the entire plant. This leaf or plant consists of a great number of small ones, set on each side a shining black rib or stalk. These smaller leaves are very short, and blunt at the extremities, of a roundish though rather oblong form, and of a bright and deep green colour. The seeds are lodged as in the others of the same tribe, in the form of a brown dust on the under side of the leaves. The root is composed of small strings or fibres.

This plant grows commonly in hollow shady places, on the sides of old wells, and on old moist stone walls; and a syrup is made from an infusion of it, as a substitute for the true *maidenhair* or *capillaire*, which is commonly sold in the shops.

It is opening and softening, serviceable in distempers of the lungs and breast, coughs, shortness of breath and hoarseness; and it is certainly useful in stone, gravel, heat, and difficulty of urine.

White Maidenhair.

THIS is also a small plant of the fern kind, and of the nature of that last described. The real *white maidenhair* is not above two or three inches high: though a kind of water fern is imposed on the public, and sold in the shops under this name, the leaves of which are a foot long. The stalks of this are very slender, of a whitish green colour, and not black as in the other. The leaves are also divided into a great number of small parts, and at first sight seem to bear some resemblance to the leaves of rue. The seeds are also found behind or under the leaves; but are contained in small lumps of a brown colour, which cover the greatest part of the surface.

It grows commonly in old walls and buildings, and has a little fibrous root which remains many years. It possesses the same virtues with the other; and is used in coughs and other complaints of the breast and lungs, but particularly in cases of obstinate hoarseness. A decoction of it also operates as a strong diuretic, and is therefore serviceable in the gravel and retention of urine.

Black Maidenhair.

THIS is another small plant of the fern kind, the common sort of which it resembles more in shape and form than either of those above described; the principal difference as to appearance being in the size. It grows six or eight inches high. The stalks are slender, smooth, black, and glossy. The leaves, which are very elegantly divided into a great many small parts, are short, of a dark shining green, and deeply indented at the edges. They terminate in a sharp point, and are not obtuse, like those already mentioned; and these leaves grow on little branches,

branches, sometimes in pairs opposite to each other, and sometimes alternately to the number of ten or a dozen pair. The seeds lie on the edges of the under part of the leaves, in nearly the same form as in the other kinds. The root is rather large and fibrous. It grows in shady places, under hedges, and at the roots of trees.

A decoction of this plant operates powerfully by urine, and has the pectoral virtues in common with the rest.

Golden Maidenhair.

THIS is rather considered as one of the largest kinds of moss than a plant. It rises four or five inches high when it is in it's flourishing state. The stalk towards the base, is covered for an inch or more with short, hard, narrow, stiff leaves, sharp at the points, and of a dull green colour; and these stand in such clusters, that they quite conceal the stalk, the upper part of which is naked, slender, and of a red brown or blackish colour. Upon the summit of this stands a long and roundish head or seed-vessel, covered with a woolly sharp-pointed cap of a yellow colour, which falls off when the head is perfectly ripe. This head is filled with a fine dust, which is the seed. The root is small and stringy.

The plant is found in heathy, barren, and boggy places, and the whole of it may be used medicinally. It has been reputed to possess the same virtues as the other *maidenhairs*, but it is little used internally. The principal application of it at present, is to make the hair grow, and for this purpose the head is to be washed with a strong decoction of it.

The Common Mallow.

THIS wild plant, which grows every where about our hedges, fields, gardens, and among decayed buildings and rubbish, rises to the height of three or four

feet. The root is large, whitish, has many branches and fibres, and runs deep into the ground. The stalk is large, and the leaves are roundish, but indented, and divided at the edges into five blunt parts; the lower leaves stand on long hairy foot-stalks. The flowers are numerous, large, and red, with veins, of purple, or a deeper red colour, interspersed. The seeds, as they lie together, are round and flattish. The plant flowers in May and June.

Every part of it may be used to some advantage, being cooling, opening, and softening, but the root possesses most virtue. The leaves dried or fresh are one of the ingredients in decoctions for clysters; and this may also be drank to assist the discharge of urine, and heal the urinary passages when they have been excoriated by the heat of the water. The root is best fresh, and should be taken before the stalk shoots, and when there are only leaves growing from it. This may be boiled in water, and the decoction made very strong, for it is by no means unpleasant to the taste. It may be drank in quantities, and is also of great service to promote the discharge of urine, and to relieve the strangury. It is equally serviceable against sharp and acrid humours in the bowels, and for the gravel and stone. It makes an agreeable drink in fevers, being acidulated with tamarinds, and is excellent to give children in the small-pox, measles, and other eruptive disorders.

There is another smaller kind of *mallow*, which has white flowers. This lies flat upon the ground; and a decoction of it is of a more agreeable taste than that of the common mallow, though it possesses the same virtues. A tea made of the roots and tops of this herb, will be found of great use in promoting the discharges by urine, and relieving all complaints which originate in the kidneys or passages from these organs.

Marsh

Marsh Mallow.

THIS is a very tall plant of the mallow kind, sometimes found wild about salt marshes, and the sides of rivers where the tide flows; but much more frequently cultivated in gardens. It grows to the height of four feet. The root is large, thick, tough, and woody; divided into many branches; yellowish without, and whitish within, and full of a slimy juice. The stalks are erect, large, and somewhat downy. The leaves are large, broad at the base, but narrower at the points, and of a form rather inclining to triangular; they are indented about the edges, and are of a faint green colour, and covered with a soft pile like velvet. The flowers resemble those of the *common mallow* in figure, but are larger, and of a more faint red colour, almost white. These are succeeded by seeds, which are also of the same form as those of the other.

The root and leaves are generally used medicinally: the former, which is of an insipid taste, may be boiled in water, and the decoction being made strong, is taken with success to promote the discharge of urine, and bring off gravel and small stones. It also relieves stranguries, and heals the excoriations of the bowels, which are occasioned by dysenteries and sharp purgings. It is good in coughs, and possesses other virtues in common with the smaller mallow, but in a much higher degree. An admirable syrup for all the medicinal purposes, is made from a strong decoction of this plant.

Vervain Mallow.

THIS plant, which is equally elegant in its flower, and the manner of its growth, is common in pastures, lands, and hedges, in many parts of England. It does not grow two feet high. The stalks are

round, of moderate size, more hairy than the common sort, and very upright. The lower leaves are small, round, and divided lightly at the edges. Those which grow on the stalk are deeply and beautifully cut into five parts in a very regular manner. The flowers are of a very lively red, not streaked, and are twice as large as those of the common mallow. The seed-vessel is larger and nearly black, and the seeds are of the same form, and disposed in the same manner as in the common mallow. The root is white, hard, woody, and spreads in the ground. It flowers through most of the summer months.

If any part of this plant is ever used medicinally, it is the root, which is supposed to have the same virtues as that of the common mallow, but in a very inferior degree. A decoction of it is rather more agreeable to the taste than that of the common mallow.

Mandrake.

OF this plant, there are two kinds: one which has broad leaves, and bears round fruit, and this is called the male; the other, with narrower leaves, and fruit of an oblong shape, which is called the female. They possess the same qualities, but in the male they are most powerful. Both these plants are natives of Italy, where they are found in woods, and on the banks of rivers. In Great Britain they are kept in gardens, where they thrive as well as in their natural soils.

These *mandrakes* have no stalks. The leaves spring immediately from the root, and are very large, being frequently a foot in length, and four or five inches broad in the middle; towards the extremities they grow narrower, and are sharp-pointed; they are of a dull green colour, and disagreeable smell. From among these leaves rise the flowers, which stand upon foot-stalks of

three or four inches high, slender, and hairy, which also come immediately from the root; these flowers are of a large size, of a purplish white colour, and of a very unpleasant smell: they are succeeded by fruit, of the size and shape of a small apple; in the male, but more resembling the figure of a pear in the female kind. This fruit is of a deep yellow colour when ripe, and the smell of it is offensively strong. The root is long, and of considerable size largest at the head, and smaller by degrees, as it descends; if it happens to meet with a stone, a root of some tree, or other interruption: it sometimes divides into two parts, from the middle down wards; but if no such accident obstructs it's regular growth, it is usually single. This is the root which is conceived to resemble the human form, to which in it's single growth it is not in the smallest degree more like, than any other large root; nay, when by any of the before-mentioned accidents, it is divided, it has no more the appearance attributed to it, than a carrot or parsnip which happens to grow in the same way.

A thousand stories are propagated of this root, all of which are equally unfounded. The human figure, head and limbs, are sometimes cut on the roots of white briony, and sometimes on those of angelica; after the roots are formed into this shape, they are put into the ground again, where they will frequently acquire the appearance of a bark, and favour the pretence of their being natural productions. The tales of these roots shrieking when they are pulled up, and the using dogs to draw them out of the earth, because it is fatal to any human being to do it, and many other reports concerning these roots, are equally idle, false, and groundless, and merely calculated to deceive the ignorant, and extort money from them. There is nothing extraordinary in the root of the mandrake, nor are the terms of male and female properly applied to the two kinds, which would be better distinguished, by describing the one as the broader leaved

mandrake with round fruit, and the other as the narrower leaved mandrake with oval fruit. The mandrake is not entitled to the distinctions of male and female, by any of those marks which procure it for hemp, spinach, and many other plants already mentioned.

The fresh root of mandrake has been formerly used medicinally; but it operates so violently, both by vomit, and stool, that few constitutions are strong enough to bear it. The bark of the root dried, works as an emetic only, but very roughly. The fruit is sometimes eaten, but it has a sleepy quality; though not in any great degree externally, the leaves are used in fomentations and poultices, and are said to be useful in hot tumours, inflammations, and swellings, particularly those of the scrophulous kind; the juice of the leaves has been also dropped into the eyes to take off heat and redness, but as it is in all respects both externally and internally, a very powerful medicine, and others may be found in the vegetable world, less violent, and more efficacious in the several disorders for which it has been tried, we do not recommend the use of it.

Sweet Marjoram.

THIS is a common plant, of no great beauty, but kept in gardens for kitchen use, and for the sake of it's virtues. It grows about a foot high; the stalks are strong, upright, woody, and somewhat hairy. The leaves, which are broad and short, have also some hairs; they are of a light green colour, not indented at the edges, and of a fragrant and agreeable smell. At the summits of the branches a kind of soft scaly heads expand to about the length of three quarters of an inch; and from these the flowers rise, which are small and white, and are succeeded by very small seeds. The root is fibrous, and, as well as the rest of the plant, is agreeably scented.

The

The whole plant may be used fresh, and it's virtues are extracted by infusion. It is recommended to relieve the head-ache, giddiness, and all kinds of nervous complaints, and it has formerly been esteemed a remedy for apoplexy, palsy, and other violent attacks in the head; but perhaps this may be attributing too much to it. It gently promotes the female periodical discharges, and removes all obstructions of the liver, spleen, and other intestines. The dried herb may be used in powder for the same disorders, but it certainly loses some of it's best qualities in this way.

Wild Marjoram.

THIS is a wild plant growing commonly in hedges and thickets, in many parts of England; yet it is superior to that preserved in gardens, both in beauty and virtues, and deserves a place with it on both accounts. It rises to the height of a foot and a half. The stalk is strong, very erect, somewhat hairy, and of a brown colour inclining to purple; it is perfectly regular in it's growth. The leaves which are broad, short, and round-pointed, and of the size of a man's thumb nail, are of a deep green colour, and stand in pairs at every joint; they have long foot stalks. The flowers blow on the tops of the branches, standing on long scaly heads of a beautiful figure and greenish purple colour; from different parts of these heads arise the flowers, which are small, but of a pleasing red or purple colour. The whole plant has a fragrant smell and aromatic taste, at least equal to those of sweet marjoram.

The fresh tops of this herb taken in infusion, are said to strengthen the stomach, and to be a good remedy against habitual colics. They are also serviceable in violent, and habitual head-aches, and in the long list of nervous complaints. They re-

move obstructions of the breast, liver, and womb, are good in the jaundice, and shortness of breath, and to promote the monthly discharges. An oil is sold in the shops under the name of oil of Origanum, but this is frequently made from garden thyme; however, it is very acrid, and a drop of it upon lint, being laid on an aching tooth, frequently gives relief.

Marjoram of Crete.

FROM the name of this beautiful plant, it appears not to be a native of Great Britain; it grows wild in several of the islands of the Archipelago, and is kept in gardens in England; it rises about a foot high; the stalks are square, straight, and covered with a brown bark. The leaves which stand on long foot stalks, are oblong, broad, and of a whitish colour. This plant has scaly heads at the tops of the branches, like the other kinds of *marjoram*, and from these spring the flowers, which are small and white.

The tops are used in medicine, and are sold dry by the druggists; but in this state, they generally lose so much of their virtues, that the fresh tops of the British wild marjoram, or even the dried ones of the last season, are preferable.

Marigold.

THIS flower is too common in every kitchen-garden to require much description; it rises a foot high: the stalks are large, angular, but not very upright. The leaves are long, rather narrow at the base, but broader towards the extremities. The flowers, which are large, and of a fine yellow colour, stand at the extremities of the branches. The whole plant is of a light green colour, with a cast of blue, and feels clammy to the touch. The root is full of fibres

The

The fresh-gathered flowers of *marigold*, picked from the cups, and made into a tea, are prescribed in fevers. They are mildly cordial, promote perspiration, and were formerly given in syrup, to throw out eruptions, which were thought necessary to appear on the skin; but the practice of inoculation has shewn us, that it was a very mistaken practice, to attempt filling the surface of the body with pustules. The juice of the flowers is recommended to cure the jaundice, to assist sore or inflamed eyes, and to remove warts.

The Mastic Tree.

THIS plant is a native of France, Italy, and the island of Chios, in the Archipelago, but it is not uncommon in our gardens. It grows to the size of an apple tree, and like that is irregular in the disposition of its branches; which, as well as the trunk, are covered with a grey bark, and are very brittle. The leaves consist each of about four pairs of small ones, without any single leaf at the end; set on a kind of rib, or foot-stalk, which has a narrow film one each side of it. The leaves, are oblong, narrow, and pointed at the extremities. The flowers, which grow in clusters, are small and yellowish, they are succeeded by a bluish or blackish berry.

The resin which drops from the wounded branches of this tree, is that gum which is used under the name of *gum mastic*; but this is only produced from those trees which grow in the Archipelago. It is hard, white, and imported in little lumps. It is serviceable in all nervous disorders, and operates also balsamically. It is said to be an admirable medicine for a spitting of blood, and in the first stages of consumptions and hectic disorders. It also restrains the whites, and those gleets which remain after venereal complaints. Applied in plaisters, it is said to relieve the head-ache and tooth-

ache, and in many parts of the east this gum is chewed to help the breath and preserve the teeth.

The wood is astringent, and a decoction of it is useful in fluxes. Tooth picks are also made of this wood, which are said to have the quality of preserving the teeth.

Herb Mastic.

THIS little plant is also a native of the warmer climates; but is commonly kept in gardens in England. It grows about a foot high, and the stem and larger branches are of a shrubby or woody nature. The smaller shoots are whitish and brittle. The leaves, which stand two at each joint, are small, of an oblong shape, and pointed; they are of a light green colour, and have a fragrant, resinous, and agreeable smell, like gum mastic. The flowers, which are small and white, spring from a kind of downy or hairy spikes or ears, of a singular appearance, by which it may be distinguished from all other plants. It remains several years, but suffers much by extreme cold which soon cuts it off, unless it is planted under a wall, or in a southern exposure. The root is small and fibrous.

The whole plant may be used dry, in infusion or powder, as a strengthener of the stomach and astringent. It restrains the overflowings of the monthly discharges, for which purpose the powder of the tops may be given in red wine: a scruple is a dose, or less, according to circumstances.

Syrian Mastic Thyme, or Marum.

THIS elegant little plant is also a native of a warmer climate, but is to be found in all the gardens and green-houses of Great Britain. It rises a foot high. The stalks are small, woody, and whitish: the leaves, stand in pairs at the joints, are small, and
in

in shape like those of *thyme*, but of a pale green colour on the upper side, and white and hoary beneath. The flowers are small and reddish, growing at the tops of the branches, in a kind of little spikes or clusters, of an oblong form; they stand in large hoary white cups. The whole plant has a very acute but most agreeable smell, and a taste highly aromatic. Cats are so fond of this plant, that they rub it to pieces whenever they get at it. It is recommended for all disorders of the head and nerves, and is seldom taken internally, but is a principal and highly useful ingredient in cephalic snuffs.

Masterwort.

THIS is a native of mountainous countries on the continent of Europe, and kept in our gardens, not for it's beauty, but it's virtues. It rises to the height of two feet. The stalks are round, channelled, hollowed, and straight, though not very strong. The leaves are each composed of three smaller; they are of a deep-green colour, somewhat resemble those of angelica, are blunt at the points, and indented about the edges. The flowers, which are small, white, and composed each of five leaves, stand in little clusters at the tops of the branches, and are each succeeded by two round and flat white seeds. The roots are long, of a brown colour without, and divided; they are of a strong smell and an acrid aromatic taste.

The root is used medicinally, and is said to be cordial and perspirative; it is serviceable in fevers, and in disorders of the head, stomach and bowels. It is also recommended in all contagious and pestilential fevers, and as an antidote against internal poisons, and injuries occasioned by bites or stings of noxious or venomous creatures. Taken up fresh, and given in a light infusion, it promotes sweat; and, perhaps, if it was more used, would be found to be a better medi-

cine for that purpose than many of the foreign roots and drugs which are kept in apothecaries shops.

Maudlin.

THIS plant is a native of Italy, and other warmer countries, but is common in our gardens, where it is kept more on account of it's virtues than it's beauty. It grows about a foot high, rising from a woody and branched root, which endures many years. The stalk is round, erect, strong, not branched, and of a light green. The leaves are numerous, longish, narrow, and finely indented about the edges. The flowers, which are small and naked, of a golden yellow colour, and consist only of a kind of thrums in scaly cups, which contain the seed, stand in large clusters at the tops of the stalks. The whole plant has a strong and rather pleasant smell, and a bitter taste. It flowers in the latter summer months.

The whole may be used either fresh or dried, but is to be preferred in the former condition. An infusion of it, persevered in for a proper length of time, is recommended in disorders of the stomach and liver, to cure the jaundice, destroy worms, and remove obstructions of the periodical discharges of women.

Stinking Mayweed.

THIS common wild plant grows in corn fields and waste places, and greatly resembles camomile, only that the leaves are more finely divided, of a dark-green, and the plant grows more erect. The stalk is round and channelled: the herb rises a foot high. The flowers, which are also like those of camomile, stand ten or a dozen near each other at the extremities of the branches, but they grow separately, and do not compose a cluster. The whole plant

has a strong and very disagreeable smell. It flowers in May.

An infusion of the fresh plant is prescribed in hysteric and hypochondriac complaints; it is also said to promote the female discharges. Boiled to a poultice, it is reputed to give ease in the piles.

Meadow Sweet.

THIS plant is frequently found wild about the sides of rivers. It grows three or four feet high, from a long reddish fibrous root. The stalk is round, channelled, erect, strong, and of a light green colour, sometimes inclining to purple; each leaf is composed of two or three pair of smaller, which are set on a thick rib, and have an odd leaf at the end. They are of a full green on the upper surface, and hoary beneath, full of veins, indented at the edges, and rough to the touch. The flowers, which are small, and composed each of five leaves, stand so close that the whole cluster represents a single large flower. These flowers are succeeded by little round heads, in which the seeds are set in a twisted manner like a screw. It flowers in June.

An infusion of the fresh leaves and tops of *meadow sweet*, acts as a perspirative, and is recommended in fevers and other malignant distempers: it is also said to be somewhat astringent, and is therefore prescribed in fevers attended with purgings. A half pint of the infusion may be taken every four hours, or oftener, as occasion may require.

The Medlar Tree.

THIS tree is common in gardens, orchards and plantations. It grows to the size of an apple-tree, and in the same irregular manner, but the branches have thorns on them. The leaves are longer and more

narrow than those of the apple tree, and are sharp-pointed. The flowers consist of five leaves each, are of the size of apple blossoms, and white. The fruit is round, open at the bottom, and incloses five hard stones. It is of an austere taste, and not eatable till it has acquired mellowness by keeping, and is even in a state of rottenness. It blooms in May, but the fruit does not ripen till November.

Medlars are cooling and astringent; a strong decoction of the unripe fruit is given to stop violent fluxes. The seeds, which operate as diuretics, are said to be a remedy for the gravel and stone, and may be administered in powder or decoction, but as they do not act very powerfully they are seldom used.

Melilot.

THE common *wild melilot* has a large branched spreading root, from whence rise several weak, slender, green, channelled stalks, with three oblong round, pointed leaves at every joint; these leaves are indented about the edges, and are generally eaten to pieces by insects. It grows a foot and a half or more high. The flowers are small, and resemble in shape the flowers of tares or pease, but much smaller: each of these is followed by a round pod, rough and green. The whole plant, and particularly the flower, is of a peculiar but not disagreeable smell. It grows very commonly among corn and in hedges, and flowers in June.

The fresh leaves and flowers of this plant are excellent mixed in poultices, to mollify and disperse swellings, and in baths and fomentations to relieve inflammations, and pains attending hard tumours. They were formerly used in a plaister for dressing blisters, but as it was not often procured genuine, and this ointment was frequently coloured with other herbs, it is not at present in much reputation.

The

The Melon.

THIS is a trailing herb, or vine, and grows to the length of eight, or ten feet. It is not erect, but creeps on the ground. The stalks are angular, large, and of a light green colour. The leaves are large and broad, rather round, but not so deeply divided as in most others of the creeping plants of this kind; the stalks are furnished with tendrils, to lay hold of any thing that presents itself. The flowers, which are very large and wide at the mouths, resemble those of the cucumber, and are of the same yellow colour. The fruit is well known at our tables, and is of various shapes, and sizes, some oblong, some nearly round, and others flattish at the ends; the different sorts, have also different surfaces, some smooth, and others rough. Melons contain many seeds, and a juicy pulp of sweet, rich, and agreeable flavour.

The seeds are used medicinally; they are cooling and serviceable in fevers, and other inflammatory disorders: they may be given in emulsions, beat up with barley-water, in which way they make a good drink, which is also directed, and gives relief, in the gravel, stone, and strangury.

The Mezereon Shrub.

THIS beautiful shrub is a native of many parts of the continent of Europe, and particularly about the mountains of Switzerland, and Germany; it is preserved in our gardens and plantations, where it rises four feet high, and is very full of irregular branches, which are very tough and strong. The leaves, which are of an oblong shape, and narrow, grow in clusters from little protuberances on the bark. The flowers, which shoot also in clusters round the upper parts of the branches, before the leaves

appear, are small, red, peach-coloured, and hollow; these are succeeded by oblong berries, which turn black as they ripen. The root is woody, and creeping, and the plant flourishes well in this climate, where it is easily multiplied. It flowers in the very early spring. The root, bark, leaves, and berries, have been used medicinally, but they all act as very violent purges, and must therefore be given with great caution, and in small doses, to such only as have strong constitutions; taken in any considerable quantities, or by persons of tender constitutions, they will occasion vomiting, and bloody stools, but to hardy people, only operate as a brisk purge; and to such constitutions, may be serviceable in dropries, asthma, and other obstinate disorders. They may be given in a light infusion, but we do not recommend it, as the administering it by ignorant persons, may be productive of some danger.

Millet.

THIS plant is of the grass kind, and grows large and upright, nor is it wholly deficient in elegance; it rises four feet high. The stalk is round, large, hollow, and jointed; the leaves, which are long, of proportionable breadth, of a pale green colour, and hairy, encompass the lower part of the stalk. The flowers and seeds grow at the extremities of the stalks, in clusters of such size and weight, that the head usually bends down. The flowers are trifling, much resembling those of other grasses; the seeds are a small, hard, and whitish grain.

The seeds are used as food in some parts of the world; here they are employed sometimes instead of barley, to make a drink, which is recommended in fevers, and against heat of urine. *Millet* is somewhat astringent, windy, and hard of digestion.

Milkwort.

Milkwort.

THIS little plant is commonly found upon heaths, and in dry pastures, in many parts of England; it has many leaves, and blue or white flowers (a variety which seems to be occasioned by accidents) which grow in loose spikes. The stalks, which are also very numerous, and much branched, are slender, and so feeble, that they spread themselves upon the ground in the form of a little green tuft; but there is so great a variety in the appearance of this plant, besides the difference in the colour of the flowers, that it has been divided into two or three kinds, by some botanical writers, yet all these will rise from the same seed, so that the difference can only be attributed to the soil; and exposure; the plant being unquestionably the same in every essential respect, and possessing the same virtues, in which ever appearance it is taken. When it grows in dry and barren places, the stalks do not exceed three or four inches in length the leaves are very thick set, short, and of an oval form. The flowers are, in this case, also of small size, generally blue, but as before observed, sometimes whitish, streaked with blue, and at other times perfectly white; when the soil is richer, and the situation more favourable, the leaves take an oblong figure, and are narrow, pointed at the ends, and of a lively green colour. The stalks are also an inch or two longer, in this case; the flowers are usually blue; and this is the state in which the plant is most commonly found. When it grows in still more advantageous situations, as upon the damp side of a hill, among springs, and in the midst of tall grass, then it's leaves are yet longer, and the stalks more stout and upright, and the flowers red. From these descriptions of the several appearances of this little plant, it will easily be discovered in every state, and it is indifferent in which of them it is

taken. The root is frequently of a considerable size, and single, but it is more commonly divided into smaller parts. It is of a whitish colour without, and of a disagreeable, acrid, and pungent taste.

This plant was unnoticed, as to any medicinal virtues, till the seneka root became celebrated in America, against the effects of the bite of the rattle-snake, and was tried and found here to be serviceable in pleurifies; it was then discovered that this was the root of a species of *milkwort*, not very different from that of the growth of Great Britain, and in consequence experiments were made with the roots of this plant, which were found to be effectual in the same cases, as to the poisonous bites of the venomous reptiles of this country; but these are so little to be dreaded here, that this part of the good qualities of this plant are of no great importance; it has, however, been found useful in pleurifies, and in all other diseases, where the blood is thick and viscid. For this purpose the root is to be taken, and it possesses it's full virtue in the spring, when the stalks are just shooting out of the ground, at which time it should be taken up and dried, for the service of the year. When fresh, it may be given in infusion; but in it's dry state it must be powdered, and taken in substance.

Spear Mint, or Garden Mint.

THIS plant is too universally known in every garden and kitchen in the kingdom, to need very minute description. It rises to the height of two feet, the stalks are square, single, erect, and strong, and of a light green colour. The leaves, which stand two at a joint, are long, narrow, and of a much darker green than the stalks, indented at the edges, and sharp-pointed. The flowers, which are small and purple, and blow in July, stand beautifully disposed in long spikes, on the tops of the stalks. The

The whole plant has a strong but a fragrant smell, and an agreeable aromatic taste. The root creeps and spreads in the earth, and is not easily extirpated.

The whole plant may be used fresh or dried, and is an admirable remedy for disorders of the stomach. It restrains vomiting and hiccough, promotes an appetite, and removes pains. It may either be given in the simple distilled water carefully made, or in an infusion. To stop vomiting, the fresh herb is sometimes directed to be bruised and applied externally to the pit of the stomach.

Water Mint.

THIS common wild plant of the mint kind, grows about almost all watery places, and does not differ very greatly from the herb last described. It is a foot or a foot and a half high. The stalks are also square, erect and strong, and generally of a dusky colour. The leaves, which are broad and short, stand in pairs at the joints, and are of so deep a green colour, as to appear brownish; they are somewhat hairy, and indented about the edges. The flowers, which are of superior size to those of common mint, are of a paler red or purple colour, and grow in round close clusters at the tops of the stalks, and about the upper joints. The whole plant emits a strong smell, not disagreeable, but seeming to partake both of that of *garden mint*, and *penny-royal*. The taste is strong and pungent, and rather more disagreeable than the other.

The distilled water of this plant is of great service in colics, pains in the stomach and bowels, and will effectually remove obstructions; in the former cases it is so efficacious, that a single dose of it often cures the colic. This herb has been excluded from common use by the introduction of pepper mint, but every species of the mint may be used. Where a simple weakness of the stomach is the only com-

plaint, the common mint may be given alone: the pepper mint is an admirable remedy for colic pains; and for suppressions of the female periodical discharges, the common wild *water mint*. All the kinds may be given in tea or infusion; but a simple water distilled from them, and made of proper strength, is very much to be preferred.

Pepper Mint.

THIS species of mint resembles more the *wild mint* last described, than the *spear* or *garden mint*, both in form and qualities. It is larger than either, growing two feet and a half high. The stalk is square, strong, and erect, and of a light green colour. The leaves, which stand in pairs at the joints, are broader than those of common mint, not very long, of a full green, and indented deeply at the edges. The flowers grow in loose oblong spikes, on the tops of the branches; they are also larger than those of *spear mint*, and of a pale red. The whole plant has an agreeable acute smell, and a biting taste like pepper. The root is slender and creeping. Though *pepper mint* is cultivated with care in every garden, it is found wild in many parts of Essex and Hertfordshire.

The whole plant is used medicinally, both fresh and dried, but the distilled water is the best preparation of it. It is an excellent remedy for the windy colic, which it sometimes removes instantly. It is also recommended as a remedy for the gravel and stone.

Long-leaved Wild Mint.

THIS is another kind of *wild mint* found in many parts of England. It rises to the height of two feet, and is of very regular growth. The stalk is square, strong, erect, of a light green colour, and somewhat hoary, and many young shoots spring

from the top of it. The leaves are long and narrow, hoary, especially underneath, deeply indented about the edges, and pointed at the extremities. The flowers grow in spikes at the tops of the young shoots; they are of a pale purple colour, larger than those of common mint, and very numerous. The whole plant has a strong but rather agreeable smell.

The leaves and stalks are used medicinally, either fresh or dried, and may be given in an infusion: the distilled water is nauseous. It is reputed to strengthen the stomach, remove colic pains, and promote the female periodical discharges; for which purpose it is esteemed a very valuable medicine, but the use of it must be persevered in for a considerable time.

The Myrtle.

THIS beautiful shrub is a native of Italy, Spain, and several islands in the Mediterranean, and is common in our gardens, and particularly in the two western counties, where it reaches a very considerable height, and stands the winter without shelter. The trunk is covered with a brown and not quite smooth bark. The branches are very numerous, small, but tough, and of a reddish colour. The leaves are elegant; they are of different sizes in the various sorts, but they are in all of a fine green colour, pointed at the extremities, and not indented at the edges; they stand in great numbers and in a regular and beautiful order upon the branches. The flowers, which are large, white, and full of threads, are set on short foot-stalks, and in some of the varieties are double: they are succeeded by a round black berry, of the size of the largest pea, with a crown at the extremity opposite the stalk. The leaves, when bruised, emit a most agreeable fragrant smell.

The leaves and berries of the *myrtle*, but

chiefly the latter, are used as medicines; they are cordial and astringent. A strong infusion of either is given with success to stop a slight purging, and it is equally useful in strengthening the stomach, and removing the complaint. The dried leaves, powdered, are excellent against the whites, and in fallings down of the womb, or the gut at the fundament, and may be used both internally and externally. The berries are esteemed a remedy for bloody fluxes, overflowings of the periodical discharges, spitting of blood, and other hæmorrhages. The infusion hath also been recommended for defluxions on the breast, occasioned by old catarrhs.

Mistletoe.

THIS extraordinary plant is a native of Great Britain, not growing on the earth like other herbs, but on the branches of trees, where it makes a very conspicuous figure. It grows to the height or length of two feet, and is divided into many woody branches, covered with a yellow bark: these branches are of different sizes, seldom exceeding the bigness of a finger, but generally much smaller; its whole figure is quite unlike the tree on which it grows, in fruit, leaves, and bark. The branches divide and subdivide regularly by two, and are easily broken at the joints or divisions, where the leaves, which are also yellowish, stand in pairs. They are fleshy, of an oblong figure, narrow at the bases, and broader toward the extremities. The flowers, which are yellow, and composed of four leaves each, are small and of indifferent appearance; they are succeeded by a white transparent round berry, of the size of a pea: this, when ripe, is full of a tough clammy juice, and contains one flat heart-shaped seed. It grows upon the oak, the maple, the ash, the lime, the crab, the apple, and several other trees; but that which is on the oak is esteemed most valuable; though perhaps, merely

merely on account of the sacred respect in which it was held by the old druids.

The leaves of the *mistletoe*, dried and powdered, are celebrated for curing the epilepsy, or falling sickness. They are also recommended, in all nervous disorders, and the consequence of those complaints, whether palsy, apoplexy, giddiness or convulsions; but if they are expected to afford relief, a proper time must be allowed for their operation, and for administering a sufficient quantity.

Moonwort.

THIS is a pretty little low plant, found wild in some parts of the kingdom, and in particular in the warren at Woolwich, but it is rather scarce. It does not exceed six inches in height, and consists of the stalk, one single leaf, and the flowers. The stalk is round, large in proportion, and strong; it is naked to the middle, where the leaf springs, and appears to be composed of several pairs of small ones, but is really a whole and single leaf, so deeply divided as to resemble a number of smaller, each of those divisions is round and hollowed, from which circumstance it has taken the name of *moonwort*. Above the foot of the leaf, the stalk continues naked for an inch or two, and then rise clusters of globular heads, containing the seeds, which are very small, dusty, and of a brown colour. The leaves of moonwort dried and powdered, are administered internally, to stop purgings and the overflowings of the monthly discharges. The fresh plant bruised and laid to a cut, is said to stop the bleeding, and heal it; and an ointment has been made of it, which has been supposed to check a bloody flux, by applying it externally to the reins.

Hairy Tree-Moss.

THIS is a plant of the moss kind, which is sometimes found in large forests, in England, but seldom elsewhere; it adheres

to the branches of old oaks, and depends from them in long strings. The tufts of it are frequently a foot long, and taken together, two or three inches thick, they consist of a great quantity of stalks and branches, the largest is not of greater size than a large packthread; they are of a greyish colour, and are made up of a soft bark, and a firm white fibre within it; the bark is frequently cracked, and the branches seem to be jointed, the smaller fibres, or branches of this plant, resemble hairs. On the largest grow, at certain seasons, little hollow brown lumps, which contain the seeds, but they are so exceedingly small that they are not observable, without close inspection. The whole plant appears to be dry and without sap in it's most vigorous state, nor has it the smallest appearance of leaves upon it.

This moss, powdered, is esteemed an excellent astringent; it must be dried in an oven, beaten in a mortar, and sifted. The white fibres are not reducible to a powder, but will remain when the soft parts pass through the sieve, and are of no use, all the virtue being contained in that part which powders. It is recommended to stop the whites, restrain overflowings of the periodical evacuations, and bloody fluxes, and to stop spitting of blood. It does not appear to be in much reputation, though it is spoken highly of, by those who have tried it; the dose is half a dram, or less, according to age and other circumstances.

Cup Moss.

THIS moss, or plant, grows commonly on ditch banks, by the sides of woods, and in other dry, barren, and hilly places. It is composed of a thin coat, of a leafy matter, which spreads upon the surface of the ground; among which arise a kind of small cups. The leafy part is as dry and devoid of juice, as a perfect withered leaf in autumn, it is divided into several irregular

gular parts, by deep notches, and is greyish or green on the upper surface, and hoary beneath. The cups, which rise about half an inch high, have each a strong stem and an open mouth, and contain no appearance of seed; these are also of the same grey and green colour, the mixture of the latter being in some instances more than in others. The surfaces of these cups have a dusty appearance, and one of these sometimes grows from the edge of another, and again for three or four stories. Among accidental varieties, this moss sometimes bears small brown lumps, and these are supposed by some to contain the seeds, though others are of opinion that neither flowers or seed are discoverable.

The whole plant may be used medically; to which end it must be taken fresh from the ground, shook clean, and a strong decoction made of it, to which must be added an equal quantity of milk; and this liquor being sweetened with honey, is said to be a good medicine for children's coughs, and of peculiar efficacy in that which is called the chin-cough or whooping-cough.

Common Ground Moss.

THIS is a still smaller plant than that last mentioned, which sometimes creeps on the ground, and sometimes rises in tufts, two or three inches high, according to the situation in which it is found, which is in woods, hedges, at the roots of trees, and upon most barren-grounds.

The stalks are extremely slender, but thickly covered with leaves, and the branches are so disposed, that they in some measure resemble fern, though infinitely smaller. The leaves, which are of a size so small as to be proportioned to the plant, are of a triangular shape, and a lively green colour; and stand off from the lower part of the

stalks, but inclose and cover them on the upper. It is very seldom that it bears seeds; but, when this happens, naked and very slender foot-stalks, about an inch long, rise from the bosoms of the leaves, and support, on the top of each, a small oblong head of a brown or reddish colour, which is covered with a cap tapering to a point, containing fine green dust; and this is the seed, but no distinction of it is perceivable.

The whole plant being dried and powdered, is administered with success, to restrain overflowings of the monthly evacuations, bleedings at the nose, and other hæmorrhages; and it is also said to be a remedy for the whites. A notion formerly prevailed, that it would stop bleedings at the nose, by being only held in the hand, but these charm-like remedies, are now generally exploded.

Mother of Thyme.

THIS little plant is commonly found wild upon heaths, commons, and waysides; and grows in little tufts, on dry hillsides. The stalks, which are round, slender, of a reddish colour, and from five to eight inches long, are very seldom erect. The leaves are small, and of an oval figure, and grow in pairs at the joints; they are smooth, and of a lively green. The flowers, which are of a reddish purple colour, stand in small loose spikes at the tops of the stalks. The whole plant emits a very fragrant smell; the taste of it is aromatic and agreeable. There are two or three varieties of this plant: one with much larger flowers; another with larger leaves; and a third, the leaves and branches of which are hairy; but they all possess the same virtues. It is said to be cephalic, stomachic, and diuretic, and to be an excellent medicine in palfies, epilepsies, and all other nervous cases; and it is recommended as a cure for green-sickness, and

and a great promoter of female evacuations. It may be used fresh or dry: an infusion of it is very agreeable to the palate, and persevered in will remove most of the common nervous disorders; and, in particular, the night-mare, a troublesome, obstinate, and disagreeable complaint, has been known to yield to this medicine. It is also said to be useful in old coughs and defluxions on the lungs, and to stop spitting of blood. An oil is distilled from it which gives ease in the tooth-ache.

Motherwort.

THIS tall plant is commonly found growing wild about farm-yards, and in dry and waste places, but particularly under walls. It rises a yard high. The stalk is square, large, erect, and strong. The leaves stand on long foot-stalks, in pairs, at the joints, each divided into three parts, that in the middle projecting beyond the others; they are deeply indented at the edges, of a deep green colour, and a very offensive smell. The flowers, which are of a red or purplish colour, grow in a kind of prickly cups at the same joints with the leaves, and surround the stalks, and these are succeeded each by four seeds in a cup. The root is small, slender, creeping, and whitish. It flowers in June.

When this plant is dried, every part of it may be used, but in it's fresh state the tops are best. It may be given in a strong infusion or decoction, and is esteemed serviceable in hysteric complaints, and to promote the female discharges. It is also celebrated for disorders of the heart, and curing the palpitation of it when that complaint is hysteric. A decoction of this herb is also serviceable to those who are subject to swoonings. The powder of it, after it has been dried, is recommended to hasten childbirth, for which purpose a dram of it is directed to be given in a glass of wine.

Mouse Ear.

THIS little plant grows upon heaths and commons, and has a small root full of strings, sending forth stalks which trail on the ground, and shoot out fibres at every joint, by which it takes fresh root. The leaves, which grow alternately, or in clusters on the stalks, are about an inch long, and half that breadth, sharp-pointed, of a deep green on the upper surface, but white beneath, thickly covered with long stiff brown hair; and so much of the under part is usually seen, that the whole plant looks hoary. The flower-stalks rise singly, and are without leaves, and hairy, each of which bears only one flower, which stands on the top, is somewhat of the shape of dandelion flower, but smaller, and of a beautiful pale yellow colour above, but streaked with purple underneath. The flowers turn to a white down, within which lie small white seeds; and the stalks, when broken, yield a small quantity of a milky juice. The plant has little or no smell, but a bitterish styptic taste.

This herb is esteemed a good astringent; a decoction of it, fresh gathered, is recommended against the bleeding of the piles, and the leaves, boiled in milk, may be applied as a poultice externally. It is used as a gargle in ulcerations of the mouth, and is good to restrain the overflowings of the periodical discharges, all other hæmorrhages and the whites. The juice of the leaves has been prescribed as a remedy for the shingles.

Mugwort.

THIS tall plant, which grows commonly in hedges, ditches, and on waste grounds, rises commonly a yard high. The stalk is round, channelled, strong, erect, and branched; often of a purplish colour,

and full of pith. The leaves, which stand upon it without regularity, are large, and each consists of a number of small parts deeply indented and pointed. They are of a dull green on the upper surface, and white underneath. The flowers, which are small and of a yellowish colour, with a cast of purple, stand in small clusters about the upper parts of the branches, but they are upright, and do not hang down like those of wormwood. The root is tough and small, running obliquely in the earth, and is full of fibres. It flowers in June.

The leaves of *mugwort* may be used fresh or dried, and are best given in infusion or tea, and they are reputed to promote the periodical discharges, and to remove the common hysteric complaints. Externally, they are applied in baths to strengthen the head and nerves.

The Mulberry Tree.

THIS tree grows to a very large size, and is common in every garden. The branches are very numerous and spreading, and, as well as the trunk, are covered with a brown rough bark. The leaves are large, broad at the bases, and narrower or pointed at the extremities, and finely indented about the edges. The flowers are close to the branches, consist of four leaves, and grow in bunches; these are followed by large oblong juicy fruit, composed of a great number of small grains set together in a round or oblong form. It is usually black when ripe, but the juice is of a beautiful purple; there is also a kind with white fruit, but this is not common in Great Britain.

The bark of the root, and the fruit, are both used medicinally; the former is to be used fresh taken off, and being boiled in water to a strong decoction, is said to be of great service in the jaundice, and to remove obstructions of the liver and other intestines. It operates by urine. The unripe

fruit is a good astringent, and efficacious in stopping fluxes and taking off inflammations from the mouth and throat; and a syrup made from the juice of the ripe fruit, with a proper quantity of sugar, is cooling, assists in quenching thirst in fevers, and, mixed with water, makes an excellent gargle for sore mouths.

White Mullein.

THIS lofty plant, which reaches to the height of five or six feet, grows wild in hedge sides, highways, and other dry places. The leaves, which rise immediately from the root, are about twelve inches in length, and the breadth of a man's hand; sharp-pointed at the extremities, indented about the edges, and covered with a hoary or downy wooliness. The stalk is large, strong, and very upright, of a hoary appearance, and covered with smaller leaves of the same figure as those from the root, only that the foot-stalks seems to run half-way up the leaf. The flowers, which consist each of one leaf divided into four parts, are of a yellow colour, and grow in spikes of two feet long, though only three or four open at a time.

The seed-vessels are oblong and pointed, and dividing in the middle when they are ripe, disclose the small brownish seed. The root is single, fibrous, and, considering the size of the plant, small. It flourishes in July.

The leaves are believed to have pectoral virtues, and those which grow from the root before the stalk rises, are esteemed the best. They are given in a decoction to restrain the overflowings of the periodical evacuations, the bloody fluxes, and most other internal hæmorrhages; they are also said to make an excellent poultice for the piles, and other painful swellings, and for this purpose are to be boiled tender in milk. The decoction is likewise recommended to relieve colic pains.

pains, when they are occasioned by acrid humours in the bowels.

Mustard.

THIS is a very common plant, of a rough appearance, which grows wild in many parts of England, but is kept also in gardens for the feed. It rises to the height of a yard. The stalk is round, smooth, stout, and of a palish green colour, and much branched. The leaves are large, rough, hairy, and of a coarse green, deeply indented, and placed irregularly on the stalk. They hang down, and are by no means elegant. The flowers, which are small, being composed of four leaves each, are of a yellow colour, grow many together on the tops of the branches, but flower by degrees, so that before the whole blowing is finished, the seed-pods reach a considerable way down the stalk, they are of a squarish figure, pointed at the ends, and full of round seed, of a dark brown colour, and biting taste. The whole plant is of an acrid pungent taste. The root is white, branched, and full of fibres; it grows in waste places, on the tops of old hedges, and among rubbish, and flowers in June.

The seeds of *mustard* are used medicinally, and the common sauce used under that name, is made of them; and this is extremely wholesome, strengthening the stomach, and procuring an appetite. It is also of service in disorders of the head, apoplexies, lethargies, and palsies. The seed, bruised and taken in considerable quantities, either in wine or ale, operates by urine, and is an excellent remedy for rheumatic and scorbutic complaints. It also promotes the female discharges; and, externally applied, is drawing and ripening: laid upon the tongue, bruised, it has been known to restore speech to those who have

been unfortunately deprived of it by paralytic seizures.

Treacle Mustard.

THIS small wild plant grows commonly in dry places, in most parts of the kingdom. It rises about eight inches high; the stalk is round and channelled. The leaves are of an oblong shape, broad, of a pale green, indented about the edges. They grow without regularity on the stems, and are destitute of foot-stalks. The flowers, which are very small, grow in little tufts at the tops of the stalks, and the seed-pods follow them; so that when the plant is in flower, it appears to be a short spike of the pods, with a small cluster of flowers on the top. The seed-pods are large, of a flattish round shape, and edged with a leafy border. The seeds are small, of a brown colour, and of an acrid pungent taste. The seed is used for nearly the same purposes as that of the plant last described, but the seeds of the garden cress are frequently sold instead of these. It is not in much reputation.

Mithridate Mustard.

THIS is also a wild plant, and frequently met with in corn-fields. It is of the height of a foot; the stalks round, strong, erect, and not much divided into branches. The leaves, which are long and narrow, are somewhat hairy, and of a dull green colour. The flowers are small and white, and these are succeeded by small and round seed pods, but not flatted, as in the former kind, nor surrounded with a leafy edge. The leaves grow in very great numbers upon the stalk, each having a couple of small ones springing from the base.

The seed of this is also the part prescribed medicinally; but, like the former, the

the cress-seeds serve for it; nor is the imposition of much consequence, as they possess nearly the same qualities, and are neither of much importance.

Sweet Navew, or Garden Navew.

THIS plant, which is only found in gardens, is not unlike the common turnip in appearance. It grows a yard in height, on the stalk, which is round, smooth, and of a pale green colour. The leaves stand irregularly, and are of an oblong shape, broad at the base where they encompass the stalk, and growing narrower towards the extremity. Those leaves which spring immediately from the root, are of much larger size, and are deeply indented at the sides, of a pale green colour, inclining to blue; and these leaves lie on the ground. The flowers, which are small and of a yellow colour, each being composed of four leaves, are succeeded by pods containing round and black seed. The root is white and large, resembling the turnip in taste, but not in manner of growth, which is more like a parsnip.

The seeds are directed to be used medicinally, but they are in no great reputation. A decoction of them is said to be perspirative, and to force any thing out to the surface of the body; and it was formerly in high esteem to expel poisons, either taken internally, or received from the bites of venomous creatures.

Wild Navew.

THIS plant produces that seed which is known in some places by the name of *rape seed*, and in others of *cole seed*. It grows wild in some parts of England, but is commonly sown not only for the sake of the seeds, from which an oil is procured for

certain mechanical purposes, but of late years by way of food for cattle, some kinds of which are extremely fond of it. It grows two or three feet high, the stalk is round, erect, smooth, strong, large, and of a pale green colour. The leaves, which grow from the root, are long and narrow, very deeply indented at the edges, and of a pale green colour, with a blue cast. Those on the stalk differ principally in size, being much smaller, they are also less divided. The flowers, which are small and of a bright yellow colour, are succeeded by long pods, containing round, large, and black seeds; these are of a biting sharp taste, and are used for the same purposes as those of the last mentioned, but are supposed to possess more virtues, though neither of them seem to have ever been in very great credit.

Nettle.

THOUGH it may seem unnecessary to describe a weed so universally known, yet as it has medicinal qualities, it ought not to be omitted. It rises three feet high. The stalks are angular and rough. The leaves, which stand in pairs, are large and of a regular shape, narrowing gradually from a broad base to a sharp point, and finely indented round the edges; these, as well as the stalks, are of a dull green, and both are covered with a kind of prickles, which easily make their way into the skin, and having at their bases hollow bags of an acrid juice; it gets into the wounds, and occasions that swelling, inflammation and pain, which the touch of the *nettle* always produces. These bags at the bottom of the prickles, are discoverable by the naked eye, on the stalk of a full grown nettle; but, by the help of a microscope, they are seen on every part of the plant. The flowers of the nettle are of a yellowish white, small, and inconsiderable; the seeds are small and round;

round; but of these plants, some bear large flowers and no seed, others smaller flowers succeeded by the seeds. The root is spreading, small, and fibrous.

The nettle is said to be cooling and astringent; the juice is recommended to restrain overflowings of the monthly discharges, and most other internal hæmorrhages and fluxes. The root, taken in infusion, works powerfully by urine, and is esteemed a medicine highly efficacious in the jaundice. The seed has been prescribed in coughs, asthmatic disorders, and other complaints of the lungs.

Roman Nettle.

THIS is another wild plant of the nettle kind, but by no means so common. It grows two feet high, the stalks are more round than those of the common nettle, and of a deep green colour. The leaves are neither so large, rough, or so hairy as those of the common sort; but, like them, are broad at the bases, narrowing to the point, and deeply indented, and full of small shining prickles, rather more sharp and stinging than the common. The flowers are small, and make no appearance; each of these is however succeed by a round ball as big as a large pea, standing on a long foot-stalk, of a deep green colour, and full of small brown shining seeds, in shape somewhat resembling lint-feed. This plant is found, but not very commonly, in several parts of Great Britain, and particularly about Romney Marsh, and Yarmouth.

The seeds are used medicinally, and are said to have pectoral virtues, and to be serviceable in coughs and desfluxions on the lungs, asthmatic complaints, and hoarseness; and for these purposes are greatly preferable to those of the common nettle, which are too often substituted for them. They are administered in the manner of a tea, which may be sweetened with honey.

Common Nightshade.

THIS plant over-runs gardens and most other cultivated places, nor can it be kept under without continual weeding. It rises to the height of two feet. The stalks are round, thick, but not very upright or strong, very much branched, and of a dusky green. The leaves, which stand on foot-stalks, are broad and round, terminate in a point, and are of a dark green colour. The flowers, which grow in small clusters, ten or a dozen in each, are composed of one leaf, cut into five parts; they are white, with a yellowish centre, and are succeeded by small round berries, at first green, but as they ripen turning to a shining black; they contain a pulpy juice, and several small white seeds of a flattish shape.

The leaves are to be used fresh, but not internally. They are said to be cooling, and may be applied, bruised, to inflammations and hot swellings, shingles, scalds, burns, and troublesome eruptions on the skin.

Deadly Nightshade.

THOUGH this plant may unquestionably be esteemed poisonous, yet even those which seem to be the outcasts of nature, in some instances act as her hand-maid. This grows wild on banks and by way-sides, and is of a dull and disagreeable appearance. It grows four or five feet high. The stalks are angular, and of a dark green colour. They are beset with broad and flat leaves, resembling in shape those of the common nightshade, but much larger, and of a dull dead green. The flowers are of a dusky brown, with a cast of green on the outside, and purplish within, are coarse, hollow, and bell-shaped, and stand singly on long foot-stalks, rising from the bosom of the leaves. These

flowers are succeeded by large, shining, round, and (when ripe) black berries, of the bigness of cherries, full of a pulpy matter of a sweetish and mawkish taste, intermixed with small flat seeds. The root is long, thick, and spreading: it grows in several parts of England, upon banks and way-sides. The berries are of a poisonous nature, and have often proved fatal to children; but, externally applied, the leaves are cooling and softening; of use to cleanse the skin of ring-worms and tetters; and, as well as the common sort, frequently used as poultices to hard swellings, and particularly those of the breast; and as they have very great virtues in this respect, the plant should be kept out of the way of children, or never be permitted to perfect fruit within their reach, as the leaves only are wanted.

The Oak.

THIS noble and beautiful tree, a native of Great Britain, and constituting it's highest ornament and chief defence, grows in some places very tall, but the disposition of it's branches are beautifully irregular. The trunk is very large; the branches, which generally spread in a circular form, are also large and frequently crooked. The bark is brown and unequal. The leaves, which are large, of an oblong shape, broad and deeply indented at the edges, are of a shining and lively green colour; the flowers scarcely perceivable. The fruit is the acorn, and not the galls, or, as they are more commonly called, the apples, which are occasioned by wounds made by an insect. There are varieties of this tree; some bearing the fruit on long foot-stalks, and the leaves on short, and others the contrary. The bark of the oak is well known as a powerful astringent, stopping purgings,

and restraining overflowings of the monthly discharges, for which it is to be given in powder. A decoction of it is recommended to help the falling down of the uvula, or palate of the mouth, and whenever a styptic or very operative astringent is required, oak bark may claim the preference over most others: considering the many virtues it possesses in this way, it is astonishing that it should be so little in use, and it's qualities so seldom enquired into.

Oak of Jerusalem.

THIS small plant is a native of warmer countries, but is kept in the gardens of Great Britain, the leaves have been supposed to resemble those of the oak tree, and from thence it takes it's name. The stalk is sixteen or eighteen inches high, round, angular, more or less channelled, and of a light green colour. The leaves, which are of a yellowish green colour, and of a rough surface, are longer and narrower than the leaves of the oak; but, like them, are pointed at the ends, and deeply indented at the sides. The flowers, which stand in great numbers of long spikes on the extremities of the branches, are round, greenish, and mossy, and grow in bunches. The whole plant emits a very agreeable smell, and especially the leaves, and those young shoots which afterwards bear the flowers.

The fresh plant is recommended in asthmatic complaints, hoarsenesses, and coughs, and is said to be generally a good pectoral. It is also given to promote the female discharges; both those which are periodical, and those which succeed delivery; in the latter case the leaves and stalks may be made into a decoction, and the patient is to sit over a proper vessel half filled with it, in order to receive the steam. Internally, it may be administered in tea or infusion.

The

The Onion.

THIS plant is too well known in our gardens to require a minute description. It rises about two feet, or two feet and a half high. The root is large, round, flat, and bulbous, being composed of several fleshy coats one above another, the whole covered with a thin skin of a glossy brown colour, and having a bunch of fibres at the lower extremity. The leaves are hollow tubes, long, round, and of the size a man's finger. The stalk is also round, and bears at the top a round cluster of small six-leaved flowers of a mixed purplish and greenish colour, and each of these is succeeded by three square black seeds. The whole plant is of a very strong and pungent smell, and particularly the root, making the eyes water of those who are unaccustomed to peel or cut it. The roots are used medicinally; they are not only a wholesome food, but assist in relieving old coughs and complaints of the breast. A syrup made of the juice of these roots with honey, is prescribed for an asthma, and beaten up with a little salt, they are applied as cataplasms to burns and scalds with great success.

The Orange Tree.

THOUGH this elegant and useful tree is not a native of this country, but of Spain, Italy, and the east, yet even here, under proper shelter, it grows to a considerable magnitude, and produces fruit in some degree of perfection. The branches spread irregularly; the bark of the trunk is brown and rough, that of the branches is smooth, of a greenish colour, and armed with several sharp thorns. The leaves are large, of a pale yellowish green colour, of an oblong shape, and moderately broad, somewhat resembling bay leaves, only that the foot-stalks of these have edges of a leafy

matter on each side, giving the whole a figure somewhat like a heart. The flowers, which grow on the young shoots among the leaves, are each a single cup-fashioned leaf, divided into five parts, with yellow threads in the middle; they are extremely beautiful, and highly odoriferous. The fruit is large, round, first green, but ripening to a deep yellow inclining to red. The skin is rough, and covers a pulp composed of a great number of small vessels full of a pleasant acid juice, among these vessels the seeds are also scattered, which are long, and pointed at the ends.

The *sour* or *Seville orange*, is the kind used in medicine. The juice is applied to the same purposes as that of lemons, and may be preserved in the same way; and a syrup equally pleasant, though for other occasions, may be made of the infusion of the peel. But the great use of this part of the Seville orange, is in tincture or infusion, as a stomachic bitter; and for this purpose only the yellow part is to be pared off very thin, and put into brandy or wine; or an infusion may be made of it by pouring boiling water on it, either fresh or dry. This tincture or infusion is of itself cordial and stomachic, strengthening and warming that organ; but it may receive some improvement by the addition of sliced gentian root, and bruised cardamom seeds, and then becomes an excellent medicine for the stomach, and much better than any other composition for bitters.

Orpine.

THIS is a wild plant, of a pleasing appearance, which is frequently found in hedges and other shady places. It grows a foot or more high. The stalk is round, channelled, fleshy, and brittle; on these grow alternately the leaves, which are of a fat substance, oblong, broad, indented about the edges, and of a bluish colour, inclining

inclining to green. The flowers, which are small, but of a beautiful red or purplish colour, grow in small clusters, and are each composed of five leaves spreading like a star; these flowers are succeeded by crooked seed-vessels, bent or horned at the extremities, and each containing several small seeds. The root is white and large. The whole plant has a fleshy appearance, and will grow a long time after it has been taken out of the ground.

The juice of the leaves and tops of *orpine*, is said to be cooling and astringent, and particularly serviceable in the bloody flux. The most palatable way of administering it is in a thin syrup, made with the finest sugar, and the addition of a small quantity of cinnamon.

Oxeye.

THIS wild plant grows commonly in some parts of the north of England, but in few other parts of the kingdom. It reaches the height of a foot and a half. The stalk is round, strong, and much branched. The leaves, which are numerous, are each winged or divided into a number of fine parts, somewhat resembling the leaves of yarrow, but shorter, more stiff and rather hoary or whitish. The flowers, which are large and of a yellow colour, and much like a marigold, stand singly at the tops of the branches.

Palma Christi.

THIS plant is a native of warmer climates, but kept in our gardens, more for ornament than use. The trunk is thick, and woody towards the bottom. It rises

to the height of six feet, and the upper part is covered with a sort of meal or powder, of a greenish blue cast. The leaves, which are large and very elegant, somewhat resembling those of the vine, are divided deeply into six, seven, or even more parts, which are also sharply indented at the edges; they stand upon long foot-stalks, which extend to the middle of the leaf, and are there joined to it. The flowers are very inconsiderable, of a dusky green, and grow in clusters toward the top of the plant. The seeds are found upon the trunk of the plant in different places, and are contained in husks, but individually covered with a hard shell.

The kernels, or inner parts of the seeds, are used medicinally, but they are at present of no great reputation; three or four kinds of them were formerly kept in druggists shops under different names, but they are now seldom enquired for. They operate violently both as purgatives and emetics, and were usually given in dropfies and rheumatic complaints.

Parsley.

THIS very common and medicinal herb grows two feet in height. The leaves, which are composed of a vast number of small parts, are divided first into three, and then into a vast number of subdivisions. They are of a lively green, and indented. The stalks, which are round, angular, or deeply channelled, small and erect, are also much branched; the flowers, which are small and white, stand in large tufts at the extremities of the branches; the seeds are roundish and channelled. The root is long and white, and somewhat fibrous.

The roots are used in medicine, and are recommended in a strong decoction for the jaundice. It operates powerfully as a diuretic, and removes obstructions.

Parsley

Parsley Pert, or Parsley Breakstone.

THIS small wild plant is commonly found in dry fallow grounds, and among corn. It has small pale leaves, and hairy stalks hanging down. It does not exceed three or four inches in length, and seldom stands perfectly upright. The leaves stand irregularly on the stalks, which are round and hoary, are narrow at the bases and broader at the extremity, where they divide into three parts, each of them rounded. The flowers grow in bunches at the joints, and are of a dusky green colour. These are succeeded by small and round seeds. The root is fibrous, and of inconsiderable size.

The whole plant may be used in medicine, and is best fresh, in which state an infusion of it has the reputation of being an excellent remedy for the gravel, operating violently, but not injuriously, by urine: it removes obstructions of the liver, and is therefore useful in the jaundice; and an opinion formerly prevailed, that it had a power of dissolving the stone in the bladder; but this does not appear to be well founded, though it may probably at least contribute to afford ease in this dreadful disease.

Macedonian Parsley.

THIS is a garden plant, where it grows two feet high. The stalk is small, divided into many branches, and hairy. The leaves consist of many parts, each of which is small and rounded. Those on the higher part of the stalk are more finely divided than towards the foot. The flowers, which are small and white, and not unlike those of common parsley, stand like them in tufts on the tops of the stalks, and are succeeded by small and somewhat hoary seeds, of a dusky colour, and aromatic taste.

The seed is used to expel wind, and relieve the colic; it is usually given in powder, and operates chiefly by urine: it is also recommended to remove obstructions of the monthly evacuations, and as a remedy for the gravel. Some have prescribed it in the dropsy and jaundice.

Wild Parsnep.

THIS plant grows commonly about hedges and way-sides, and rises to three feet. The stalk is straight, erect, round, channelled, and of a yellowish colour. The leaves, which are composed of many large divisions, resemble those of the *garden parsnep*, but are much smaller and hairy. The flowers are small and yellow, and grow not only at the tops of the stalks, but on the sides, in large round tufts; the seeds are flat and of an oval figure like those of the cultivated sort. The root is long, white, and well tasted, but not so large as the garden parsnep, and this is used in a strong decoction which operates by urine, and removes internal obstructions. It is recommended against the gravel and jaundice, and to bring down the periodical discharges.

The Peach Tree.

THIS tree, though not originally of British growth, is now found against every garden wall. The trunk is covered with a rough bark, and the branches grow irregularly, unless they are trained by art. The leaves are long, narrow, and elegantly but thinly indented at the edges. The blossoms, which are large, are of a pale red, inclining to purple. The fruit is too universally known to require description. It consists of a soft and delicious pulp, under a downy skin, in the middle of which is one hard stone, containing a kernel of an agreeable,

able, though bitter taste. It flowers in March and April, and the different kinds of fruit ripen in August, September, and October.

The flowers only are used in physick; a pint of boiling water is directed to be poured on a pound weight of peach blossoms, plucked from the cups; after it has stood four and twenty hours, it is to be strained through a sieve, without pressing, and two pounds of loaf sugar being dissolved in it over the fire, it becomes a pleasant syrup, and is given to children to carry off thin watery humours, and destroy worms. It purges gently and sometimes acts emetically, but not without violence.

It may always be kept as a convenient and useful laxative, and is fit for children in most cases.

Pellitory of the Wall.

THIS plant commonly grows wild on old walls, where it rises a foot high, but is seldom perfectly upright. The stalks, which are round, brittle, somewhat hairy, and jointed, are often inclined to a purplish colour. The leaves, which stand upon them without regularity, are about an inch long, broad in proportion in the middle, and narrower at each extremity. The flowers, which stand close to the stalks, are small and scarce observable; they are of a whitish green colour when they are open, but the bud is reddish.

The whole plant may be used in medicine. An infusion of it fresh, operates by urine, and is said to be very serviceable in the jaundice, and to give immediate ease in violent fits of the gravel and stone, being taken in considerable quantities. It is equally beneficial in stranguries, and suppression, retention, or heat of urine.

Penny-royal.

THIS plant grows wild in marshy places in some parts of England, but is also much cultivated in gardens. The stalks are a foot long, round, and sometimes of a reddish colour. They commonly creep on the ground. The leaves are small, broad, but pointed at the ends, stand two at each joint, and are of a pale green colour. The flowers grow round the joints, just above the leaves, in thick clusters, they resemble those of mint, and are of a pale red colour, but the cups in which they stand are green and somewhat hairy. The whole plant has a very strong penetrating smell, and an aromatic though not disagreeable taste.

Every part of this plant is used medicinally, either fresh or dried; but that which is found wild is said to be more efficacious than the larger kind cultivated in our gardens. It may either be taken distilled to a simple water, or in tea or infusion. It operates by urine, and promotes the female discharges, as well the periodical as those after child-birth. It is an excellent remedy for asthmatic complaints, coughs, and pains in the breast, and even the whooping-cough has been relieved by a strong decoction of it. It is esteemed useful also in the colic, and to remove obstructions.

Periwinkle.

THIS pretty plant is found wild in shady banks and dry ditches in some parts of England, but is more commonly kept in gardens. The roots are creeping strings and fibrous, and send forth numerous stalks, a foot or more in length, but they do not stand upright: they are round, green, and tough, and either lie upon the ground or rise and twine about pales or other plants. The leaves are oblong, broad, of a shining green

green colour, particularly smooth on the surface, and standing two at each joint. The flowers, which are large and blue, and resemble in shape the flowers of jessamine, though they are rather more pointed, stand on long foot-stalks; they are sometimes succeeded by two longish pods, each containing several seeds; but these do not often come to perfection.

This is called a vulnerary plant, and the leaves and stalks may be boiled in water, and the decoction drank with a mixture of red wine, in which way it restrains the overflows of the monthly discharges and other internal hæmorrhages. It also stops the bleeding of the piles, and is useful in the whites, and other discharges occasioned by weakness.

Pimpernel.

THIS small plant is common in corn-fields, dry ditches, and borders. The stalks are angular, smooth, and green, but not erect. They sometimes run five or six inches long. The leaves, which stand opposite each other at the joints, are of an oblong form, broad in the middle, and growing narrower and pointed at the ends. The flowers, which stand singly on long and slight foot-stalks, are small, and of a beautiful bright scarlet colour.

The whole plant may be used medicinally, and may be given in decoction; but perhaps an infusion made by pouring boiling water upon it fresh-gathered, may be a rather better way, and may be used as a common drink in fevers, encouraging sweat, and helping to throw out eruptions, where that is necessary. The leaves may be dried and powdered, and taken in this way by those who cannot swallow much liquid, but the infusion is certainly best.

There is also a *female pimpernel*, which differs only from this which is called the *male pimpernel*, in the colour of the flowers,

which in this is blue. It is also said to be inferior in virtue to the other sort.

The Pine Tree.

THIS beautiful tree is a native of Italy, where it grows to a very great size, as well as in other parts of the world. It is in every plantation in England: and in North-Britain the Scotch fir flourishes spontaneously; but this is not the same tree. The trunk of the true *pine* is covered with a rough bark of a dark brown colour; that on the branches is smoother, and more inclining to red. The leaves, which are long and slender, grow always two together from the base, or out of a common sheath; they are of a green colour, with a blue cast, and are somewhat hollowed on the inner part. The flowers, which stand in a kind of tufts on the branches, are scarce discoverable; the cones are of a brown colour, large, long, and obtuse at the extremities. Between the scales of these, certain white kernels are found of a sweet taste, and covered with a thin brittle shell.

These kernels are the part used in medicine, and they are prescribed in consumptions, and by way of restorative, when the body has been worn down by disease; they may be beat up to an emulsion with barley-water, and are recommended also for coughs and hoarseness, and for retention and heat of urine.

The Wild Pine Tree.

THIS tree, which grows in the woods in many parts of Germany, very much resembles the *pine* before described. This also grows to be a large and tall tree, the trunk being like the former, covered with a rough brown bark; that of the branches is paler and more smooth. The leaves are more narrow and short than the other sort, but

but these also grow two out of a case or husk as the other, and are of a like bluish green colour: the principal difference in the leaves is, that these are shorter. The flowers, which are yellowish, but very small and without beauty, are succeeded by cones smaller than the others, but hard, and sharp at the tops; the kernels are found among the scales as the other, but these also are smaller. They have the same virtues as those of the other pines, but are not so much regarded on account of their inferiority in size.

Turpentine, as it is called with us, is the resin which flows from this tree, either naturally or when it is cut for that purpose. It is a whitish thick substance like honey, of a strong and disagreeable smell, and worse taste.

This turpentine being distilled to make oil of turpentine, the substance which remains is common resin; if the fire is extinguished early enough it is yellow resin, if it is continued long it is black resin; but common resin is sometimes obtained by boiling the turpentine in water without distilling it, and if this is taken out half boiled, it is what is called burgundy pitch. The whitish resin, which is called *thus*, or *frankincense*, is of a different nature from *olibanum*, or the *fine incense*, which is the resin flowing naturally from the branches of this tree, and hardening into drops upon them. The difference between this and the common turpentine, is mostly in it's being less offensive to the smell: it's qualities are nearly the same.

Resin of all kinds, tar and pitch chiefly, are used in plaisters and ointments, as well as the common turpentine. The finer turpentines are given inwardly, and are procured from the turpentine tree, the larch tree, and the silver fir. Both the yellow resin and the black are sometimes taken internally in pills, in which way they are recommended as a remedy for the whites, and the discharges which remain after venereal injuries;

but for these purposes, some better sort of turpentine should rather be boiled to the consistence, and administered.

Piony.

THIS flower is common in our gardens, but it is as useful as it is ornamental, though not the common double piony which is called the *female piony*. The single flowered one, which is distinguished by the name of the *male piony*, is the kind used in medicine. This grows to the height of two or three feet. The stalk is round, channelled and branched. The leaves, which are of a deep green colour, are each composed of several others. The flowers, which are of a considerable size, are of a deep purple or crimson colour, with a green head in the midst; and when the flowers are withered this head swells into two or more seed vessels, which are externally whitish and hairy, but red within, and full of shining black seeds lying in regular order. The roots, which are composed of a number of longish or roundish lumps, connected to each other, and to the main source of the stalk by fibres, are brown on the outside, and white within.

It is the root which is used medicinally; an infusion of it promotes the periodical discharges, and the powder of it dried is said to be beneficial in hysteric and nervous complaints. It is strongly recommended as efficacious against the falling sickness.

Pitch Tree.

THIS is that well-known tree of the fir kind which is commonly called the *red fir*. It grows regularly to a very considerable height: the bark of the trunk is brown, inclined to red on the branches, the colour is not so strong. The leaves, which are very numerous, short, narrow, and of a deep green colour, and very thick, terminate

minate in a sharp and prickly point at the extremities. The flowers are yellowish, but scarce perceivable; the cone long and large, and differing from some other firs in hanging down, those of the true fir-tree, or the yew-leaved fir, standing upright.

The young shoots at the extremities of the branches are used medicinally. They are replete with a resin of the turpentine kind, and may be given in decoction or brewed into beer, and in this form are prescribed in rheumatic and scorbutic complaints; they work by urine, and are said to heal ulcers of the urinary parts.

This tree produces tar and pitch. The tar sweats out of the wood of it in burning, and the pitch is that tar boiled to a consistence. To obtain tar, great quantities of the wood are piled up artificially, and fire being set to them at top, the tar sweats out of the ends of the lower parts, and is received into a hollow or pit as it runs from them.

Broad-Leaved Plantain.

THIS plant grows commonly by waysides, and has broad short leaves, and small but long spikes of seeds of a brown colour. The leaves rise immediately from the root, the stalks bearing none. These leaves are of a figure inclining to oval, and indented at the edges, but without regularity, and sometimes scarce at all. These leaves have several large ribs not growing sideways from the middle one, but all lengthways in the same direction, from the base of the leaf towards the point. The stalks rise a foot high, but one half is naked, and the upper part thick set with flowers of inconsiderable size and mean appearance, and of a greenish colour, with a particular cast of whiteness; these are succeeded by seeds, which are very small, and of a brown colour.

The virtues of this plant have been very highly extolled. Every part of it may be used, but it is best fresh; and in that state a decoction of it in water may be useful to restrain overflowings of the monthly discharges, violent purgings, with bloody stools, and vomiting of blood, and all other internal hæmorrhages, as well as the bleeding of the piles, and other disorders of the like kind. The seeds powdered are prescribed against the whites.

There is also another kind of *plantain* which has short flowery spikes, and leaves broader and somewhat hairy. This possesses as much virtue as the kind before described. And besides both these there is the *narrow-leaved plantain*; but this possesses less virtues than either of the other sorts.

Plowman's Spikenard.

THIS tall, strong, wild plant, grows commonly by road sides, and in dry, hilly, and chalky pastures, and rises to the height of three feet. The root, which is branched, woody, and fibrous, sends up several round, thick, straight, and somewhat hairy stalks. The leaves which spring from the root are large and broad, those on the stalk narrower; but both are blunt at the points, and somewhat indented at the edges. The flowers, which grow on the tops of the branches, spread into a large head or open cluster from a single stem; they are small, and of a yellow colour. They pass away in down, leaving long slender seeds; the leaves and flowers have a fragrant aromatic smell.

The leaves and young tops are used medicinally, and a decoction of them is recommended against internal hæmorrhages, and in pains of the side and shortness of breath. The root dried and powdered is said to be a remedy for violent purgings, and the whites.

Poley-Mountain.

THIS plant is a native of the warmer parts of Europe, but is frequently to be met with in our gardens. It grows about ten inches high. The stalks are square, and of a whitish colour; the leaves, which are oblong and narrow, are also of a white colour, and woolly to the touch; they stand at the joints in pairs, and are indented at the edges. The flowers are small and white, growing in woolly tufts at the extremities of the branches; both leaves and branches are very agreeably scented, and may be used fresh, but are better dried. An infusion of it promotes the periodical discharges, opens obstructions of the liver, and is highly recommended in the jaundice and dropsy, operating by urine. It has also had the reputation of being an antidote to the poisons communicated by the bites and stings of reptiles.

Candy Poley-Mountain.

THIS little plant is a native of the islands of the Archipelago, and is kept in some gardens in England. It does not grow above six inches high; the stalks are square, white, feeble, and seldom erect; the leaves stand in pairs at each joint, and are narrow, oblong, and not indented at the edges. The whole plant is of a white woolly aspect, like the last mentioned, and of an agreeable smell. The flowers, which are small and white, and grow in tufts at the tops of the stalks, are still more odoriferous. The cups, which contain the flowers, are very white.

The whole plant is used, and can only be had dried, for that which grows in England has but little virtue. It operates very powerfully by urine, and is recommended as a remedy for hysteric complaints, but is a dangerous medicine to pregnant women,

promoting the female discharges so violently, that it may occasion miscarriage.

Polypody.

THIS is a kind of fern, which seldom grows above a foot high, and consists commonly of several leaves rising from the same root, yet each is a separate and compleat plant. The stalk is naked for four or five inches from the root, and from thence to the top is set on each side with a row of small oblong and narrow leaves, or parts of leaves, with an odd one at the end, all very finely indented at the edges. The whole plant is of a lively green colour, but the backs of these leaves, or rather of the leaf, are, towards Autumn, marked with a great number of round spots, of a reddish brown colour, standing in double rows, and these are the seeds. Those of all the other seeds are produced nearly in the same manner. The root is long, slender, and full of small knots, each appearing like the foot of an insect, from which circumstance it had it's name. It creeps upon old walls, and upon surfaces of old stumps of trees among the moss. The root only is used, and it is best fresh. It is a safe, but very gentle purge, and may be given in a strong decoction, in which form it also operates by urine. It is said to purge bilious melancholic humours, and to be good in the jaundice and dropsies. It is also reputed to be an excellent ingredient in diet drinks, for the scurvy, and is indeed a safe and good purge on most common occasions.

The Pomegranate Tree.

THIS is found wild in Spain and Italy, where it grows to the size of an apple-tree; with us it is only to be met with in gardens, and of very inferior size. The branches spread without regularity, and are covered

covered with a reddish brown bark, having here and there a few thorns. The leaves, which are most numerous at the extremities of the branches, are small, narrow, of an oblong form, and of a fine green colour. The flowers are large, and of a most incomparably beautiful deep red. The fruit is of the size of an orange, has a brown hard woody covering, and contains within a great quantity of seeds, surrounded by sweet and pleasantly acid juice.

The rind of the fruit is used medicinally; it must be dried and given in decoction, and is a powerful astringent, stopping purgings and bleedings of all kinds, and being also esteemed useful in the whites. The juice of the fruit is grateful, and strengthening to the stomach.

The Pompkin.

THIS large and straggling plant is cultivated by poor people in many parts of England. The stalks, which are very long and thick, lie upon the ground, are angular and rough, and take up a great deal of room. The leaves are extremely large, of a roundish figure, resembling those of the onion, but pointed at the corners. They are of a dark green colour, and somewhat rough to the touch. The flowers are very large, and in shape and colour like a yellow lily. The stalks are furnished with tendrils or holders; and the fruit, which is of the melon kind, only bigger, is round, and of a deep green before it ripens, when it turns yellow. The contents are a fleshy substance, among which are contained many large, white, oval, flat seeds. It is commonly sown on dunghills, and the fruit ripens in September or October. Of the fleshy part of the fruit, mixed with a quantity of sour apples, the common people sometimes make pyes. The seeds are said to be useful in medicine, being cooling and diuretic; they are taken in emulsions made

with barley-water, and make the mixture as milky as almonds. Some people prefer them to all the cold seeds for stranguries and heat of urine.

The Black Poplar.

THIS tree grows frequently about waters, rising to a very considerable size, and making a very handsome appearance. The bark on the trunk is smooth and pale; the branches, which are numerous, seem to shoot in a form of natural regularity. The leaves are smooth and shining, stand on long foot-stalks, are short and broad, round at the base, but terminating in a point; both the branches and leaves are subject to large swellings or excrescences, occasioned by small insects. The flowers are inconsiderable, and the catkins which bear them and the seeds are longish and loose. They appear early in the spring, and are little noticed.

The leaves and buds of the *Black Poplar* are used in poultices with other herbs, and applied to hard painful swellings; but their efficacy is rather doubtful. An opinion hath prevailed, that a decoction of the buds will assist the growth of the hair, and thicken it.

The White, or Garden Poppy.

THIS plant is a native of the warmer climates, but cultivated in our gardens for medicinal uses. It rises to the height of four or five feet; the stalk is round, smooth, erect, and of a bluish cast; the leaves, which are very long, and of proportionate breadth, are deeply and irregularly notched and divided at the edges, and are nearly of the same colour as the stalks; they stand on the stalk without regularity, and in some measure encompass it. The flowers are very large and white, standing singly

singly at the tops of the several divisions of the stalk into branches. These flowers hang down, but become erect as they expand; each of them consists of four large white leaves, inclosed in two shining husks or films, which drop off as the flower opens, and are shortly succeeded by the flower itself, and when that is fallen, the seed-vessel or poppy-head grows to the bigness of a large apple, having a kind of crown on the head, and being divided by membranes into several partitions, each of which contains a great quantity of small whitish seeds.

The whole plant is full of a thick milky juice, of a strong, bitter, and acrid taste, much resembling that of opium; and, as well as the smell, equally disagreeable.

The heads, and sometimes the seeds, are used medicinally in this country; the former, boiled in water, make the syrup of diacodium: for this purpose the heads are dried, and the decoction is made as strong as possible, and then brought to a syrup with sugar. The seeds are beaten up in emulsions, and are said to be useful against stranguries and heat of urine; and these do not possess the sleepy quality of the syrups, nor of the other parts or preparations of the poppy. Syrup of diacodium inclines those who take it to sleep, but in a much less degree than opium or laudanum, and is therefore a safer medicine.

Opium, the best sort of which is imported from Turkey, is the milky juice of this plant, hardened. It is obtained by making incisions in the heads while they are still upon the plant; and the milky juice which flows out of the wounds is thickened by the sun, and in that state is gathered and mixed together in those lumps in which it is brought to England. An inferior kind is also made by bruising and squeezing the heads and liquid. Liquid laudanum, or, as it was formerly called, the thebaic tincture, is a tincture of this opium made with wine; both this and the solid opium are indifferently

given to compose the sick to sleep, and to abate the torturing sense of pain. They are also cordial, promote perspiration, and restrain violent purgings and vomitings; but in all cases they should be administered with great care and caution, for they are very powerful, and in those last mentioned, in very small doses, however frequently it may be necessary to repeat them.

Opium, musk, and cinnabar, are the medicines which seem most to be depended on for the cure of the bite of a mad dog; but it does not appear that the effect of them is certain, after the symptoms of madness have appeared. It is said they have in some instances succeeded, but have failed in many more. In the locked jaw, and other violent spasmodic attacks, even the external use of it is recommended, as well as the internal.

Black Poppy.

THIS plant is also a beautiful exotic, but not so elegant as the former. It does not grow above a yard high. The stalk, which is round, straight, strong, and smooth, divides towards the top into several branches. The leaves, which in proportion to its size are as long and broad as those of the *white poppy*, are of the same bluish green colour, and deeply and irregularly indented at the edges. The flowers are however very different; they are large and single, of a dull purple colour, with a black bottom. The heads or seed-vessels are round, but seldom exceed the bigness of a walnut; they contain black seed.

This poppy is seldom used, though the syrup of it inclines to sleep more strongly than the common diacodium. The gentle operation of that medicine has recommended it, and when a more powerful one is necessary, opium or laudanum are the most effectual.

Red

Red or Wild Poppy.

THIS plant is universally known, being found in corn fields, where it's large scarlet flowers are very distinguishable. It grows about a foot high. The stalk is round, slender, rough, branched, somewhat hairy, and of a pale green. The leaves are long and narrow, of a dull green, hairy also, and very deeply but regularly divided into seven or nine parts, that at the extremity being the largest. The flowers are large, and of a beautiful bright scarlet colour, with a black spot towards the bottom. The head seldom exceeds the size of a very large pea, and contains many small dark-coloured seeds. The stalks and leaves are full of a bitter yellow juice, of a strong smell, but not so powerful as that of the two last mentioned plants, though it is distinguishable enough to be of the opium kind.

A syrup is made from the flowers, by plucking them from the cups, and pouring as much boiling water on them as will just cover them after they are closely pressed down in the vessel: after it has stood a night, the liquor may be strained off and boiled to a syrup, with a proper quantity of sugar, and this syrup gently promotes sleep; and being a much less powerful medicine than the diacodium, it is highly recommended in pleurisies and fevers; but, as it appears, without any good foundation. It's principal, and perhaps only virtue, is it's sleeping quality.

The Primrose.

THIS beautiful early spring flower is universally known. The leaves are of considerable length and breadth, of a pale green colour above, but whitish beneath, and wrinkled on their surfaces; they spring immediately from the root in great numbers. The stalks, each of which supports a single flower, are slender, about four or

five inches high, somewhat hairy, and naked of leaves. The flower is large, beautiful, and of a very pale yellow colour, with a yellow spot in the middle, the root fibrous and whitish. It grows in every hedge and thicket, and flowers in March and April.

The root is used medicinally; the juice of it being snuffed up the nose, brings on sneezing, and is said to relieve violent head-aches. It may also be dried and powdered, but is not so powerful in that state.

Privet.

THIS shrub grows wild in the hedges in many parts of Great-Britain. It seldom grows above four or five feet high. The branches are smooth, slender, tough, and covered with a brown bark. The leaves are of an oblong form, broad in the middle, but growing narrower towards both extremities. They are of a dusky green colour, and stand in pairs opposite to one another; are of substance rather firm, and are not indented at the edges. The flowers, which are small and white, stand in tufts at the ends of the branches, and each flower is succeeded by a black berry, which does not ripen till September, though the flowers appear in May and June. The tops of the branches, and the leaves, are used in medicine, and are in perfection when the flowers just begin to bud. A strong infusion of them in boiling water, with the addition of a little honey and a spoonful of red wine, is an excellent gargle to wash the mouth and throat when they are affected with sores, or when the gums are subject to bleed.

Purslain.

THIS is a common garden plant, used in sallads, and of a very extraordinary appearance. It grows about a foot long,
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but great part of it trails on the ground. The stalks are large, round, and fleshy, of a reddish colour, and extremely brittle. The leaves, which are short, broad, and blunt at the extremities, are of a lively green, and are also thick and fleshy. The flowers are small, of a yellow colour, and stand among the leaves on the summits of the stalks. These are succeeded by roundish seed-vessels, containing small, black, and ill-shaped seeds; the roots are small, fibrous, and of a whitish colour.

It is said to be an excellent remedy for the scurvy, and the juice expressed from the fresh herb, and mixed with a little white wine, works by urine, and is prescribed to relieve stranguries and heat of urine, and in this way also is good against the scurvy. The seed is cooling and astringent, and is supposed to destroy worms.

The Quince Tree.

THIS tree, which is common in our gardens, seldom grows to the size of an apple-tree, and is of less growth. The trunk is large, and is covered with a brown bark. The branches are numerous, weak, and spreading. The leaves resemble those of the apple-tree, but are more round, of a dusky green on the upper surface, but hairy underneath. The flowers or blossoms are large, each being composed of five leaves, of a beautiful pale flesh colour, or light purple. The fruit is shaped like a pear, is covered with a woolly down, and has a large crown: it is yellow when ripe, and of an agreeable smell, but the taste is so austere that it can hardly be eaten without being baked, or made to a conserve. The seeds are soft, but remarkably mucilaginous.

Both the fruit and seeds are used medicinally; the juice of the ripe *quince* makes a syrup which is recommended to stop vomitings and the hiccough, strengthen the

stomach, and restrain violent fluxes and purgings. The seeds boiled in water, give it a softness and a mucilaginous quality, and bring it to the consistence of a thick jelly; and this is an excellent medicine for sore mouths, and chopped nipples; it may also be used to soften and moisten the mouth and throat in violent fevers.

The Radish.

THE root of this common plant is eaten in great abundance in the spring; and at this season is long and slender, of a purple, scarlet, or pink colour, (for there are different sorts) on the parts next the leaves, and white below. From these roots spring a quantity of large, rough, hairy leaves of a dark green colour, and irregularly divided: among these, as the plant draws to maturity, rises the stalk, which is sometimes three feet high, round and much branched. The leaves on it are of a much smaller size than those from the root. The flowers, which are each composed of four leaves, are very numerous, small, and white, with some spots of red; these are succeeded by rather large, light, pointed seed-vessels, inclosing reddish brown seeds of an oval shape, and about as large again as a rape seed.

The juice of the fresh roots mixed with white wine, is reputed an excellent remedy against the gravel, scarce any thing operating more speedily and powerfully by urine, or is more successful in assisting the discharge of small stones. But in the way these roots are commonly eaten they are windy and unwholesome.

Horse Radish.

THIS plant is as well known in our gardens as the former, and grows wild also, in some places near rivers and other waters. The root is very long, and of an hot,

hot, biting taste, and pungent volatile smell, so that it affects the eyes of those who scrape it, and brings on sneezing. The leaves are two feet in length, and half a foot in breadth; they are of a deep green colour, obtuse at the points, and in some lightly indented at the edges, in others deeply cut and divided. The stalks rise to the height of three feet, bearing very small and narrow leaves, and at the top stand long spikes of small white flowers; these are succeeded by little seed-vessels, but the plant does not constantly flower, and when it does, the seeds scarcely ever arrive at perfection. It is propagated by the root, the smallest portion or even fibre of which will become a plant.

The juice of the root of *horfe radish* is a very powerful diuretic, and is prescribed for the jaundice and dropsy. Whole or sliced, it is put into diet drinks to sweeten the blood; and eaten frequently, and in quantities, with meat, it is a good remedy for the rheumatism. The root scraped is used in sinapisms and hot poultices to the feet in many disorders.

Ragwort.

THIS plant is very common on banks, and in dry pastures, and is distinguished by the ragged leaves which give it name, and clusters of yellow flowers. It grows about two feet high. The stalk is stout, round, channelled, and frequently of a purplish colour. The leaves are divided into several parts, in such a manner as to look torn or ragged. They are of a dark dull green colour; are joined to the stem without any foot-stalk, and are broad and round at the extremities. The flowers, which are of moderate bigness and a yellow colour, grow at the tops of the branches in clusters of great size; they pass off in a downy, flat, ash-coloured seed. The whole plant has an offensive smell. The root is spreading, and full of long white fibres.

Those leaves which rise immediately from the root are used medicinally, being not only larger but more juicy than those on the stalks. They are applied outwardly as a remedy for pains in the joints, and the sciatica, or hip-gout. They are also used in ointments, or fomentations, to old sores and foul ulcers, and are said to possess cleansing and healing qualities.

The Raspberry Bush.

THIS shrub is in every garden, and grows wild also in some parts of England. The stalks are round, straight, brittle, of a pale brown colour, and prickly. The leaves are divided into five parts on one foot-stalk; they are of a pale green, full of high veins, indented about the edges, and hairy. The flowers are small, consist each of five leaves, and are of a whitish colour, with many threads in the middle. The fruit is composed of several grains: it is soft to the touch, and of a delicate taste and delightful smell. These berries are of two sorts, red and white.

The juice of the ripe fruit boiled to a syrup, is pleasant, agreeable, and wholesome to the stomach, corrects sicknesses, and stops vomiting.

The common Reed.

THIS plant grows by the sides of rivers, and in watery places. The roots are thick, knotty, and jointed, the stalks are round, hard, jointed, and five or six feet high. The leaves are long, hard, rough, and narrow, like those of grass; of a light green colour, and much ribbed. The flowers, which are brown and chaffy, stand in husky spikes on the tops of the stalks, which are bent down by the weight. No seeds are discoverable.

This

This plant is not often used in medicine, though the juice of the fresh roots is said to promote the periodical discharges effectually, but not violently. It operates by urine; and is a good remedy for strangueries, gravel, and heat of urine.

Prickly Restbarrow.

THIS little plant is common in wastegrounds, and by road sides. It grows about a foot high. The stalks are round, reddish, smooth, and tender whilst they are young; but afterwards tough, in a manner woody, and full of sharp thorns. The leaves are very numerous, and stand three on every foot-stalk, or one leaf is rather divided into three parts like trefoil; the leaves grow pretty close to the stalk, and are of a dusky green, and finely indented about the edges. The flowers, which are small and purple, resembling in shape those of a pea, but more flat, stand among the leaves towards the upper parts of the stalks; each flower is followed by a small pod, containing two or three kidney-shaped seeds. The root is tough, woody, and white.

The bark of the root is used medicinally; to obtain which, the root is to be taken up fresh, and the bark being separated, is to be boiled in water. The decoction given in large quantities, is said to be a good remedy in the gravel, and all obstructions of urine; it is of course also recommended in the dropsy and jaundice. Vinegar being added to this decoction, the mouth may be gargled with it as a preservative of the teeth.

Rhapontic.

THIS stout plant is a native of Scythia, but is kept in many gardens of Great-Britain. It grows to the height of four feet. The stalk is round, channelled, about an inch in diameter, sometimes hollow, and

generally upright. The leaves are large and broad: those which spring immediately from the root, being a foot or a foot and a half long, and from nine to twelve inches broad; these are of a dark green colour, with large ribs, and round but pointed at the ends. The flowers, each of which consist of six leaves, are small and white; they stand in large clusters at the tops of the stalks, and are succeeded by large, shining, triangular, brown seeds. The root is large, and thick at the head, but divides into many branches: is of a dark brown colour on the outside, but of a deep yellow within, and a bitterish taste, and this is the part used in medicine. If this root is carefully preserved, it somewhat resembles rhubarb, and is of the same nature, but less purgative, and more astringent; and, on this account, it might answer better in many cases, if it could be had genuine; but what is procured at the druggists cannot always be depended upon, as many roots may be substituted, which will impose on those who are not perfectly well acquainted with it.

Garden Rocket.

THIS plant is only found in our gardens; it grows two or three feet high, and very straight. The stalk is round, and of a dark green; the leaves, which are of an oblong form, somewhat resembling those of mustard, are broad, of a dark green colour, and deeply divided at the edges. The flowers are of moderate size, and of a whitish colour, with purple veins, and stand in long spikes at the tops of the stalks. They are succeeded by long and slender smooth seed-vessels, divided into two parts by a thin membrane, which separates when the seed is ripe; and this is round, small, of a reddish colour, and pungent taste. This herb is sometimes eaten as a salad herb; but it is not very agreeable; it operates by urine, and is said to be a remedy for the scurvy.

scurvy. A strong infusion of the leaves may be made, and then boiled to a syrup; and this is recommended to alleviate coughs, to cause expectoration, and ease the lungs.

The Dog Rose, or Wild Rose.

THIS bush grows in every hedge. The stalks or stems are round, woody, and very thickly armed with prickles. The leaves are composed each of several smaller, standing in pairs on a common rib, with an odd leaf at the end; they are small, of an oblong shape, of a lively shining green colour, and indented with beautiful regularity at the edges. The flowers, which are single, large, and elegant, are white, with a faint blush of red. These are succeeded by a fruit, which is the common hip; it is red, oblong, and contains a great quantity of hairy seeds in a fine acid pulp.

This fruit is the only part used medicinally; the pulp being separated from the skins and seeds, is made into a conserve with sugar, and becomes a pleasant medicine, and is of considerable efficacy in removing coughs. It is also useful and agreeable to quench violent thirst in fevers; it is also good for all complaints of the breast, and is esteemed an antiscorbutic.

Nor are other parts of this plant deficient in virtues, if they were tried; the buds gathered before they are open, and dried, would be found an excellent astringent, and much more powerful than the red roses, which are commonly dried for this purpose. A strong infusion of these dried buds, and the powder of others, administered twice a day, is an efficacious medicine to restrain overflowsings of the monthly discharges, seldom failing to effect a cure. The seeds being separated from the pulp, dried and powdered, operate by urine, and are prescribed against the gravel, but they are not very powerful.

There is still another medicinal production of the *Dog-Rose Trees*, and this is a kind of spongy fibrous tuft, of a green or reddish colour, which is found on the branches of this shrub, and is called *bedeguar*. Many of these are sometimes seen on the same tree, and they are caused by wounds made by insects in the stalks, as the galls are produced upon the oak. These tufts or excrescences are astringent, and given in powder are said to stop fluxes.

The Damask Rose.

THIS shrub, which is only found in our gardens, very much resembles that last described. It grows four or five feet high, according to the situation; but the stalks are not so strong, nor does the plant grow so erect as the other. The stem and branches are armed with sharp prickles; the leaves, which are each composed of two or three pairs of smaller ones, with an odd one at the end, are whitish, hairy, broad, and finely indented at the edges. The flowers are large, and of a very beautiful pale red colour, full of leaves, and of an admirable pleasant smell. They are succeeded by fruit, like the common hip.

The flowers are gently purgative, they are commonly made into a syrup, by pouring upon a quantity of them, fresh gathered and plucked from their cups, boiling water enough to cover them; after standing twenty-four hours, the liquor may be pressed off, and twice the quantity of sugar added. It is esteemed an exceeding good purge for children; and grown people, who are subject to be costive, may take a little of it every night, and it will keep the body open continually, without producing the disagreeable effect of binding afterwards, as is the case with medicines which purge strongly. The finest rose-water is distilled from *damask roses*.

The White Rose.

THIS rose-tree grows taller than any other, and is found rising sometimes to the height of ten or twelve feet; but the stem of this is also feeble, so that it can hardly support itself upright, and the branches are slender and weak. The stalk is round, prickly, and much branched; the leaves are of a dark green, and, like all the other roses, composed of several pairs of smaller, with an odd one at the end. The flowers are rather smaller than those of the damask rose, but of the same form; they are perfectly white, and are less odoriferous than the damask rose.

The flowers of this plant also are only used, but these must be gathered in the bud, and may be used fresh or dry; a strong infusion of them is said to be effectual in restraining overflowings of the female periodical discharges, and the bleeding of the piles; and the distilled water is preferred to that of the other sorts for eye-waters.

The Red Rose.

THIS shrub is also common in gardens, and is the smallest and lowest of the several kinds of roses. The stalks are round, woody, and feeble, but they are less prickly than those of the other sorts. The leaves are large, but are of the same figure as the others, being composed each of three or four pair of smaller ones, of an oval form, and of a dusky green colour; they are also beautifully indented round the edges. The flowers are nearly of the shape and size of those of the damask rose, but not so double; and these roses have a quantity of yellow threads in the middle. They are of a fine deep red colour, and they are less fragrant than any rose. The flowers are succeeded by the same kind of fruit with all the others.

The flowers are in much use in medicine; they must be gathered in bud, and cut from the husks, so as to take none of the white bottoms; these buds being dried, make the conserve of red roses. The flowers have most virtue when dried; they are given in infusion or in powder, and are said to be efficacious in restraining overflowings of the monthly discharges, and all other internal hæmorrhages. A tincture is also made of these roses, which strengthens the stomach, stops vomitings, is of service in consumptions, and a powerful as well as agreeable remedy in fluxes of every kind.

Rosemary.

THIS shrub is not a native of Great-Britain, though it is found in every garden; it grows wild in Spain, France, and Italy, and even in this country rises to the height of six or seven feet, but is weak, and does not support itself in an upright form. The trunk is covered with a rough brown bark; the leaves, which stand very thick in brittle and slender branches, are narrow, about an inch long, and rather thick; they are of a deep green on the upper surface, and hoary or silvery underneath. The flowers stand among the leaves on all parts of the branches, but mostly towards the tops; they are large and beautiful, of a pale purple colour, and of a very agreeable smell. The whole plant makes a very beautiful appearance when it is in full flower.

The tops of *rosemary*, when they are in flower, are thought to contain it's greatest virtue; and being used as tea for a considerable length of time, they are excellent against violent head-aches, convulsions, tremblings, and all other nervous complaints. A conserve may be also made of them, which will answer the same purposes; but it should not be composed of the picked flowers only, the flowers and tops of the branches together, have more virtue. These flowery
tops

tops of *rosemary* are the principal ingredients in Hungary water, which is made by putting two pound of these into a common still with two gallons of melasses spirits; and this may be distilled to one gallon and a pint.

Rosa solis, or Sun-Dew.

THIS little plant grows commonly in boggy grounds, and on heaths. It does not grow above six or seven inches high. The leaves, which all spring immediately from the root, are roundish and hollow; are about the size of a finger-nail, and stand on foot-stalks of an inch long; these foot-stalks are covered and fringed in a very curious manner, with short red hairs or bristles, and in the hottest season of the year each leaf hath a drop of clear liquid standing on it. The stalks are slender and without leaves, and at their tops stand little white five-leaved flowers, which are succeeded by small seed-vessels of an oblong form, containing a great number of very small seeds. The root is fibrous and small. It flowers in June and July.

The roots, stalks, and flowers, may be used fresh-gathered; they are esteemed efficacious in the cure of convulsions and tremblings of the limbs, and the whole tribe of nervous and hypochondriac complaints; but this plant is not at present in any high degree of reputation.

Rhubarb.

THIS plant, though a native of different parts of the east, is at present well known in our gardens. It sometimes reaches to three feet in height. The stalk is round, large, channelled, and of a greenish colour, but sometimes stained with purple. The leaves are large, and of a form rather triangular; they are broad at the base, narrow at the points, and indented or waved

along the edges. They stand on thick hollow foot-stalks, which have also frequently a reddish cast. The flowers, which are whitish, small, and little observed, stand at the tops of the stalks in the same manner as the flowers of the *dock*, which they somewhat resemble. The seed is of a triangular shape. The root is perfectly well known; it is large, long, and generally divided towards the bottom: when it is cut it is of a yellow colour, and appears veined with dark purple; but these veins are more discoverable in the dry than in the fresh root; it is not altogether unlike the appearance of a cut nutmeg, but of a lighter colour.

The virtues of the root are universally known; it is a gentle purge, but acts as an astringent after it's purgative operation. It strengthens the stomach and bowels, restrains vomitings, and removes the cause of colics. It is equally beneficial in the jaundice, and rhubarb and nutmeg, in equal portions, dried together before the fire, compose an admirable remedy against purgings: but it is in vain to attempt an enumeration of the virtues of this root, scarce any chronic disease can be mentioned in which it is not serviceable; in all those which affect the stomach and bowels, it is not to be equalled.

Rue.

THIS little shrub is found in most gardens, where it grows to the height of three or four feet. The stem is strong, woody, tough, and covered with a bark of a whitish colour. The branches are numerous, and the young shoots are round, green, and smooth; but as they grow older they assume the appearance of the stem. The leaves are composed of many small oval obtuse divisions; they are of a bluish green colour, smooth, and of a fleshy substance. The flowers, each of which is composed of four hollow leaves, are yellow, and though not large, are very conspicuous; they

they have eight threads in the centre, which surround a green head, appearing to be cut or divided into four parts, each full of holes, and containing small, black, rough seeds. The root is woody and fibrous.

Rue should be used fresh gathered, the tops of the young shoots containing most virtue. They may be given in infusion, or made into a conserve with sugar, and taken in that form. The infusion is recommended as a very good medicine in fevers, raising the spirits; and promoting perspiration, but it is too hot for the modern practice to answer this purpose, as it drives out eruptions too violently. It is also prescribed in headaches, nervous disorders, convulsions, and hysterics. The conserve is recommended for weaknesses of the stomach, and pains in the bowels; and is said to expel poison, and cure the bites of mad animals and venomous reptiles. It is not disagreeable, and may be taken frequently by persons subject to the disorders above mentioned, with great advantage.

Rupture Wort.

THIS is a small and low plant, which grows wild in some parts of the kingdom, but is more commonly found in the gardens of the curious. It seldom grows above three or four inches long, and the stalks lie on the ground; and many growing from the same root, they spread into a kind of circular form. They are slight, jointed, and of a light green colour. The leaves, which are extremely small, are nearly of an oval figure, and stand in pairs at the joints; these are also the same light green. The root is long, but not large.

The juice of the leaves and stems of this plant fresh gathered, has been much celebrated as an external application for ruptures: from this opinion, which has been perhaps formed without any great founda-

tion, it has received its name. An infusion of it taken inwardly, operates by urine, and is said to relieve in the gravel and jaundice.

Saffron.

THIS plant, which is of the same kind with the flowers which are called crocuses in the gardens, is cultivated in fields in some parts of England, and particularly in Essex and Cambridgeshire, and produces a very considerable profit. The flowers appear in autumn, but the leaves are not visible till some time after the flowers are fallen; these flowers rise immediately from the root, and have indeed no stalk. The root is round, bulbous, and about the size of a large nutmeg, with many white fibres at its flat bottom. The flowers are inclosed in a thin skin or husk, and are composed of six long but round-pointed purple leaves. In the centre of these, stand three threads with yellow tops, but these are useless: between them, however, rises up what is called the pistil of the flower, which at its top separates into three long threads of an orange or fiery red colour, and these are the true *saffron*. They are carefully taken out of the flower and pressed into cakes, after having undergone a particular process, in which cakes it is sold under the name of English saffron, which is esteemed the best in the world. The leaves, which follow the flowers, are long and grassy, of a deep green colour, and very narrow.

Saffron is a noble cordial, strengthening the heart and vital spirits, and resisting putrefaction; it was formerly given in all eruptive disorders to drive out the pustules, but that has been long thought unnecessary; it removes obstructions of the liver and spleen, and cures the jaundice; it is helpful in consumptive cases, asthma, and difficulty of breathing; externally applied it moderates pain, and ripens abscesses and tumours.

Bastard

Bastard Saffron.

THIS plant does not bear the smallest resemblance to that last described in any other respect than in the yellow threads which grow from the flower. It is of the thistle kind, and rises two feet or two feet and a half high, growing very upright. The stalk is round, angular, and branched; but is without prickles. The leaves are of an oblong shape, about two inches long, and one broad, pointed and prickly about the edges. The flowers, which stand at the tops of the branches, consist of round, scaly, and prickly heads, with yellow thready flowers growing from among them: these flowers resemble the heads of thistles, but are narrower and longer, and are succeeded by white angular longish seeds, growing narrow at one end.

The flowers are employed in dying in some parts of Europe. The seed only is used medicinally, and is recommended in the rheumatism and jaundice; it is taken in infusion, which operates both by vomit and stool, but not very violently; it carries off tough phlegm, clears the lungs, and is said to assist the pthific.

Red Sage.

THIS is the common garden *sage*. It is a shrubby plant, and grows a foot or two high, and is full of branches. The stem is hard, woody, tough, and covered with a brown rough bark. The leaves are of an oblong form, rough, and wrinkled; they stand on long foot-stalks, and are sometimes of a hoary green, and sometimes of a reddish purple colour. The flowers grow on long stalks, which rise only at a particular season of the year, and stand above the rest of the plant; they are large and blue, set in large clammy cups, and are of the figure of the dead-nettle flowers, but more

open. The whole plant has a very agreeable smell.

The leaves and tops are used medicinally, and are best fresh; the usual way of taking them is in infusion or tea, and this seems to be better than any other. This herb is cordial, and good for most diseases of the head and nerves, palsy, convulsions, and tremblings; it also promotes perspiration. A strong decoction, or the juice of the fresh leaves, acts diuretically, and removes obstructions. Sage tea is a common drink in fevers, but should not be given in considerable quantities in the small pox and other eruptive disorders, where it is not advisable to load the skin with pustules, as it assists in throwing out eruptions.

Sage of Virtue.

THIS plant resembles the former in it's manner of growth, but is smaller and without the red colour. It rises a foot or two high, and is very thick. The stem is woody, and the branches numerous. The leaves are of an oblong shape, narrower than the common *sage*, and of a hoary green colour: there is often a pair of small leaves or ears at the base of each of the larger. The flowers are the same as those of the red *sage*, but smaller. The whole plant has a smell equally agreeable with the other.

Of this plant the green tops are used generally, and they possess nearly the same virtues as that last described, but not so powerfully. It was formerly conceived that this was less heating than the garden *sage*, for which reason it was preferred to it, but this opinion seems to have been ill-founded.

Wood Sage.

THIS plant grows wild in hedges and woody places in many parts of England; it's leaves are like those of *sage*, and

like those plants it has long spikes of small flowers. It grows two feet or two feet and a half high. It has many square firm woody and hairy branches. The leaves stand in pairs at the joints; they are rather shorter and broader than those of *sage*, like which they are rough and wrinkled, but of a greener colour, and indented about the edges. The flowers are numerous, and of a greenish yellow colour, with some purple threads in them. The plant has a peculiar smell, which is not disagreeable, though it has something of the garlic flavour, but not strong enough to be offensive. It flowers in July.

The fresh tops and leaves are used medicinally; an infusion made of them promotes urine, and the monthly discharges. The juice of the leaves, drank for a length of time, is esteemed a remedy for gouty and rheumatic pains, and for the scurvy and dropsy. It has also been reputed a vulnerary plant, and useful to prevent gangrenes and mortifications.

Sampfire.

THIS plant grows in immense quantities on the rocks and cliffs of the sea in many parts of England, and has been commonly called *sea fennel*, to which plant it however scarce bears the smallest resemblance. It has, indeed, many small and long leaves, but they are much larger than those of fennel, irregular, obtuse at the points, and thick and fleshy. The stalk is round, hollow, channelled, and much branched. The flowers are small and yellow, and stand at the tops of the stalks in great clusters, and are succeeded by round seeds larger than those of fennel. The whole plant has an agreeable aromatic taste, and a fresh pleasant smell. The root is thick, long, and enduring.

The leaves and young branches, without any of the hard or larger stalks, are pickled and brought to our tables; but

they are not often brought genuine to London, other things being substituted and pickled in their place. The juice of the fresh leaves is a very powerful diuretic, and is serviceable in the gravel, stone, and jaundice; it also helps to remove suppressions of the periodical discharges.

Sanicle.

THIS plant is commonly found wild in woods in many parts of England. It grows to the height of a foot or eighteen inches. It has a small fibrous root, from which rise immediately great numbers of leaves, standing on long foot-stalks, and making a conspicuous appearance; they are of a round shape, but deeply cut so as to appear five-cornered; they are indented about the edges, of a very dark green colour, smooth and shining. The stalk is channelled, upright, and without leaves. On the summit grows a small round tuft of little white flowers; each of these is succeeded by two little rough seeds. It flowers in May.

The leaves are chiefly used in medicine. A strong decoction of them is recommended to restrain the overflowings of the monthly discharges, and the bleeding of the piles. It has been formerly prescribed for the cure of ruptures, but ineffectually. This is one of the old vulnerary plants.

The Sassafras Tree.

THOUGH this elegant tree is a native of America, yet it may be met with in some gardens in Great Britain. In its natural state it grows thirty or forty feet high. The trunk is free from branches till it comes near the top; the branches grow near together, and spread handsomely. The leaves are of two kinds; those on the lower parts of the twigs are oval, but pointed, and

and somewhat resemble bay leaves; those towards the extremities of the branches are larger, broader, and divided into three parts, like the leaves of maple, or the smaller leaves of the fig-tree. The flowers, which are small and yellow, grow in clusters, and are succeeded by small berries like bay berries. The wood is light, of a reddish colour, and agreeable scent. The root is large, and covered with a dark grey or iron-coloured bark.

The wood of the root only should be used; but the stem is too often substituted. It is imported in logs, and cut into shavings, but is sometimes stripped of its bark, which contains the most virtue. It is usually administered in infusion as tea, in which way it is not disagreeable, and is a constant ingredient in antiscorbutic diet drinks. It promotes perspiration, and is esteemed a remedy for all foulnesses of the blood, of which it is said to be a great sweetener.

Savine.

THIS shrub is found in our gardens, where it continues green all the winter. The trunk is covered with a brown or reddish bark; the branches, which are numerous, and stand irregularly, bear small narrow leaves, of a dark green colour, and prickly. They are somewhat like those of cypress, and emit a strong smell. The flowers, which are very small, mossy, and of a greenish yellow colour, are succeeded by small berries, which are black when they are ripe, and covered with a bluish dust, like the bloom of a plum; but these berries seldom come to perfection.

The tops of the young branches have been formerly used medicinally, and were commonly given in tea; but they so very powerfully promote the periodical discharges, as to be very dangerous to women with child, frequently causing a miscarriage, it is therefore very properly out of use.

The common people give the juice with milk to children, to destroy worms. It operates by stool, and frequently brings worms away with it; but it is a very rough medicine, and not fit for children of tender constitutions.

Summer Savory.

THIS plant grows in every kitchen-garden. It seldom exceeds ten inches or a foot in height. The stalks are numerous, hard, woody, brown towards the bottom, and green and tender towards the tops. The leaves, which are long and narrow, stand in pairs at the joints, and the bases of them are full of young leaves. The flowers, which are white, with a little tinge of red, grow on the upper part of the stalks between the leaves; and each flower is succeeded by four small dark brown seeds. It flowers in June, and the whole plant has a very agreeable smell, and grateful taste.

The leaves and stems are medicinally used; an infusion, drank by way of tea, is said to relieve colic pains, expel wind from the stomach and bowels, assist shortness of breath, remove obstructions, and promote the periodical evacuations.

Winter savory differs little from the above described, and has much the same virtues.

White Saxifrage.

THE roots of this very pretty plant consist of several small reddish round grains, connected by a few fibres. It is found in our meadows, and distinguished by the regularity of its leaves, and its white snowy flowers. It rises to the height of ten inches. The stalk is round, large, strong, erect, and somewhat hairy. The leaves, which are of a light green colour, are thick, and of a fleshy substance; of a round shape, and indented round the edges. They stand upon long foot-stalks. The flowers are large and white,

white, and grow in great numbers on the tops of the stalks; and are succeeded by two horned roundish seed-vessels, containing many very small seeds.

The whole plant has been formerly used, and the small parts of which the root is composed, have been called, by ignorant people, saxifrage-feed. However, these are the parts principally recommended, and a decoction of them is diuretic, and useful in the stone and gravel. They are best fresh.

Meadow Saxifrage.

THIS plant grows wild also in meadows and pasture-grounds, but though known by the same English name as that last mentioned, is very different from it in form and flower. It rises upwards of two feet high. The stalks are round, deeply channelled, of a dark green colour, and very much branched. The leaves, which are large, are divided into a number of fine narrow parts. The flowers, which stand at the tops of the stalks in little tufts, or round clusters, are small, and of a pale yellow. They are succeeded by small channelled reddish brown seeds. The root is about the thickness of a finger, of a brown colour without, white within, and of an aromatic and pungent taste and smell. It flowers in August.

The root is used medicinally, and is best fresh taken up. It may be administered in a strong infusion, and operates powerfully as a diuretic in bringing off gravel. It also relieves colic pains occasioned by the same cause.

Scabious.

THIS is a well-known wild plant, in corn-fields and meadows. It grows about three feet high. The leaves spring chiefly from the root, and are spread upon the ground. They are of an oblong shape,

divided without regularity at the edges, and of a pale green colour; hairy, and somewhat rough to the touch. The stalks, which are round, erect, hairy, and of the same light-green colour, have but few leaves on them, and these are placed two at each joint, and are more deeply divided than those on the ground. The flowers stand at the extremity of the branches, and are of a deep blue colour, and each is composed of a number of smaller hollow parts collected into a head. The root is long and brown.

Those leaves, which spring immediately from the root, and are gathered before the stalks appear, are best for medicinal use. A strong infusion of them fresh, is prescribed as a remedy for asthmas and difficulty of breathing; and the same infusion made into a syrup, is recommended for coughs. An infusion of the flowers is also said to be cordial, to promote perspiration, and carry off fevers; but this is somewhat doubtful, the juice, however, is applied externally, to remove foulnesses and eruptions of the skin.

Garden Scurvy Grass.

THIS plant grows wild about the sea-coasts in the north of England, and is kept also in gardens. It rises a foot high. The stalks are round, feeble and green. The leaves, which rise from the root, stand in large tufts, on long foot-stalks, and are of a round form, and a lively green colour, tender, full of juice, and appearing hollow, so as somewhat to resemble a spoon. The stalks bear but few leaves, and they are more angular and pointed than those which rise from the root. The flowers, which stand at the tops of the stalks, grow in small clusters, and consist of four white small and bright leaves; they are succeeded by small, round, spreading seed-vessels, containing little round seeds; the leaves and flowers have a hot acrid taste. The root is long and fibrous.

The

The leaves and stalks are used fresh; and an infusion, or the expressed juice of them, is an excellent remedy for the scurvy, and all other foulnesses of the blood, cleansing the skin from pimples, scabs, and eruptions. If the juice is taken, it may be rendered pleasant by mixing with it orange or lemon juice and sugar, and in this way it should be administered every day for six weeks or two months in the spring of the year, to those who have scorbutic habits.

Sea Scurvy Grass.

THIS plant also grows wild about our sea-coasts, and in salt marshes, over which the tide flows. The leaves, though less numerous than those of the other, are rather thicker and larger, of an oblong shape, and a reddish green colour, pointed at the ends, and sometimes irregularly indented at the edges. The stalks, which hardly rise so high as those of the garden sort, are tender, round, and channelled, and, like the other, have only a few leaves on them. The flowers, as well as the seeds, in all respects resemble the other, and like them are pungent and acid to the taste. The leaves are used medicinally fresh-gathered, and may be taken either in the juice or an infusion. The virtues of this plant are the same as those of the other, but some are of opinion that it is not equal in efficacy, and the taste is certainly less agreeable.

Self-Heal.

THIS plant grows every where in meadows and pasture-grounds, and way-sides. It has a slender fibrous creeping root, and seldom grows above six inches high. The stalk is angular, and somewhat hairy, and has a few leaves, which stand in pairs upon it, but these seldom amount to more than two or three pair: a much larger

quantity however spring immediately from the root; they are of an oblong form, broad in the middle, and narrower at the bases and extremities, and not at all indented round the edges. The flowers, which are small, stand in a kind of short spikes or heads at the tops of the branches, and the cups which contain them are purplish; each flower is succeeded by four longish brown seeds in the bottom of the cup. A strong decoction of the leaves of this plant is astringent, restrains purgings, accompanied with acrid or bloody stools, and stops the overflowings of the monthly discharges. The juice may also be taken for the same purposes, and is perhaps more efficacious. The dried herb may be made into an infusion, and sweetened with honey as a gargle for a sore throat or ulcerated mouth. The juice, or an ointment made from it, has been esteemed a good dressing for old ulcers and sores.

Bastard Sena.

THIS shrub is a native of Italy, but kept for ornament in the gardens of Great-Britain. The trunk is not very stout, but particularly erect, and as well as the branches, which are numerous and slender, is covered with a whitish rough bark. The leaves consist each of several pairs of smaller, set on a common rib; having, as usual with leaves of this description, an odd leaf at the end. The flowers, which grow in bunches at the extremities of the shoots, are small and yellow, and the tufts hang down; they are succeeded by large thin bladders of a greenish colour, flattish on the upper part, and boat-shaped beneath, crooked at the ends, and full of kidney-shaped black seeds. It flowers in July.

The leaves are sometimes used medicinally, and an infusion of them given as a purge, but it is a very violent one, and apt to work both upwards and downwards. It

is therefore only fit for very hardy constitutions; such as can bear them may find relief from them against rheumatic pains.

The right Service Tree.

THIS tree grows wild in some parts of this kingdom, particularly in some of the western counties, and in Staffordshire, but is hardly known in others, even in the gardens; it is of moderate size, seldom much more than twenty feet high, and the branches spread much, but very irregularly. The leaves, which are what are commonly called winged, being composed of several pairs of smaller, set on a common rib, with an odd one at the end, are long, narrow, and indented, resembling in some measure those of the ash tree. It bears clusters of small five-leaved white flowers, each of which is succeeded by a fruit of the shape and size of a very small pear; and these fruits grow together in clusters like the flowers, each of them having foot-stalks an inch long. The fruit is green, except when it has been exposed to the sun, where it generally turns reddish. The taste, whilst it is green, is harsh and austere, but very pleasant when it is ripe.

The unripe fruit is given as an astringent, and used to stop fluxes, for which purpose the juice is pressed out, and boiled to a syrup with sugar; but it is seldom to be met with, and the following sort is generally substituted.

The common Service Tree.

THIS is a much larger tree than the other, and very beautiful, being of regular growth, and the leaves differing from those of the former, and resembling those of the *maple*, being of an elegant shape. The bark of the trunk is whitish and rough, but tolerably smooth on the branches,

where it is of a deeper colour. The leaves are not winged but large, of a roundish figure, and deeply divided into many parts, and generally indented round the edges: they are of a light green on the upper surface, and hoary or whitish underneath. The flowers, which are small and of a yellowish white, grow in clusters. The fruit, which grows in bunches, is about the size of a small hazel nut, and of a brown colour when ripe.

The unripe fruit of this *service* is also recommended to stop purgings, but recourse can only be had to it in the particular season when it is in this state, as there is no method of preserving the virtue in it throughout the year.

Shepherd's Purse.

FEW wild plants are more common than this, which over-runs every garden and court-yard, wall, hedge, and heap of rubbish. The leaves are spread flat on the ground, in a round form, they are three or four inches long, but not very broad, and generally deeply indented at the edges, but in this there is considerable variation. The stalks, which are round and slender, but erect, grow about eight or ten inches high, and have only a few sharp-pointed leaves, without foot-stalks on them. The flowers, which are white, small, and composed each of four little leaves, stand at the tops in small clusters; below there is commonly a kind of spike of the seed-vessels, three of which succeed each flower, and are short, broad, and of the figure of a bag or purse, containing a number of very small reddish seeds. The root is white, fibrous, and almost tasteless.

Shepherd's purse is recommended as cooling and astringent, and is said to be good against such purgings as are attended with sharp and bloody stools. It is also prescribed to restrain the bleeding of the piles,
the

the overflows of the periodical discharges, and other internal hæmorrhages. It may be given in infusion, or the expressed juice; in the former way it has been esteemed useful in fevers.

Skirret.

THIS plant is kept in our kitchen gardens, the roots being commonly brought to table. It grows to the height of three or four feet. The stalk is round, hollow, channelled, and pretty much branched. The leaves are winged, and each composed of three or five smaller, the pair or pairs being set opposite to each other, and one larger at the end; these small leaves are oblong, indented at the edges, and sharp-pointed. The flowers are of a greenish white and small, they stand in round clusters at the extremities of the branches. The root is of a peculiar form, being divided into several long parts like carrots, but of a white colour, they are agreeably tasted, and somewhat like parsnips.

A decoction of the roots is said to be diuretic, and to relieve the pains of the gravel. Boiled in milk they are strongly recommended as a restorative to persons who have been reduced by long or violent illnesses.

The Sloe Tree.

THIS shrub is universally known, being found in every hedge, and known by the name of the black thorn. It is actually a plum-tree, though of very inferior size, seldom growing above five or six feet high. The trunk and branches are covered with a black or purplish bark. The leaves are small, nearly round, and of a pleasant green, beautifully but lightly indented about the edges. The flowers, which appear early in the spring, even before the

leaves, consist each of five leaves, and are small and white. The fruit is a plum of a very diminutive size, and austere taste when unripe, but pleasant when mellow.

The juice expressed from unripe flocs is esteemed a very good astringent, and is recommended for fluxes and internal hæmorrhages. It may be made into a syrup with sugar, or boiled down to a consistence, in which way it will keep the whole year; and is of a darkish colour on the outside, but reddish and transparent within. It was formerly kept in the druggist's shops, under the name of German acacia, and it was substituted for that drug.

Smallage.

THIS is a wild plant, growing commonly about ditch-sides, and in other watery places; the root is about the size of a finger, wrinkled and striking deep into the ground, and from it spring many leaves, which are winged in the manner of celery leaves. The stalk is sometimes two feet, or two feet and a half in height, and is round, smooth, channelled, somewhat angular, and branched. It bears some leaves like those from the root, composed of many broad and indented parts, but those are smaller. The flowers, which are small, and of a faint yellow, stand in little clusters at the divisions of the branches. They are succeeded by small and channelled seeds of a light colour, and biting or hot taste.

The roots and leaves are used as diuretics; a strong infusion of them, fresh gathered, operating briskly by urine, and in this way are esteemed good against the gravel, stone, and stoppage of urine. The infusion of this plant is also recommended to remove obstructions, and assist in the cure of the jaundice or dropsy. The seeds dried expel wind, ease colic pains, and strengthen the stomach. The whole plant is antiscorbutic.

Sneeze-

Sneeze-Wort, or Field Pellitory.

THIS pretty plant grows wild in wet meadows, and watery places. The root is woody, creeping, and fibrous. The stalk, which grows near two feet high, is firm, erect, and very little branched. The leaves, which are very numerous, stand without regularity, and are an inch or more in length, but very narrow, rough to the touch, of a lively green, and finely indented about the edges. The flowers stand in clusters at the tops of the stalks. They are less than daisies, which they a good deal resemble, and are of a whitish colour. It flowers in July.

The leaves of *sneeze-wort* are of a hot, biting taste; dried and powdered, they may be taken by way of snuff, promote sneezing, and are a remedy for the head-ach. The roots dried, are almost as hot as pellitory of Spain, like which they cure the tooth-ache; a piece held in the mouth drawing off the cold rheum, and bringing immediate relief.

Solomon's Seal.

THIS plant grows wild in woods and coppices in different parts of England; but is more common in gardens. It rises a foot or eighteen inches high. The stalk is round, channelled, of a pale green colour, without leaves half way up, and from thence to the top clothed with large oval ones, of a pale glossy green colour, blunt, smooth, ribbed, and not at all indented at the edges; and these leaves being set alternately on the stalks incline to one side, and bend the stalk that way. The flowers spring from the bases of the leaves, and are small and white, with pretty long foot-stalks. The flower is succeeded by a berry as big as a pea, at first green, but black when ripe. The root is white, oblong, about the size of a finger, marked

with the seal like impressions from whence it takes it's name. It creeps upon or very near the surface of the ground, and is fibrous.

The root is used medicinally. It is dried and powdered; it is recommended to stop purgings with bloody stools, and other hæmorrhages. A conserve made of the fresh roots with sugar is esteemed excellent against the whites, and the juice is said to heal wounds, and assist ruptures; the leaves bruised, and applied as a poultice, are said to remove black and blue spots occasioned by blows or contusions.

Sopewort.

THIS plant grows wild, but not very commonly, about rivers, and watery places, and is about a foot or eighteen inches high. The stalk is round, strong, jointed, and of a light green; the knots are of considerable size, and the whole stalk is in a manner encompassed by the broad bases of the leaves: these stand in pairs at each joint, and are of an oval form, and darker green colour, smooth, not indented at the edges, and having three large veins on the back of each. The flowers, which stand in clusters at the tops of the branches, are of a pale purple colour, and moderate size; and these are succeeded by long and round seed-vessels, containing many small round seeds. The root is creeping, knobbed, and fibrous, and of an unpleasant sweetish taste.

It was called *Sopewort* from the juice being used to get greasy spots out of cloaths. The leaves and roots are used; the latter should be fresh taken up; a decoction of either or both is said to remove obstructions, acting diuretically: it also promotes perspiration, and is a sweetener of the blood. It may be externally applied as a poultice, to ripen whitloes and other tumours.

Sorrel.

Sorrel.

THIS plant grows every where in pastures and meadows, and flowers in May or June. It rises sometimes a foot and a half high. The stalk is long, slender, channelled, upright, and a little branched. The leaves are of a dark green colour, broad, oblong, sharp pointed, and having two ears at the base like spinach; they are not at all indented about the edges. The flowers grow at the tops of the stalks, in a long reddish spike like those of docks, a small kind of which it generally resembles. The flowers are full of threads, and are succeeded by small glossy triangular seeds, husky. The root is about the size of a finger, of a yellowish brown colour, and fibrous. The whole plant is of an agreeable acid taste. The leaves may be eaten as a salad, or the juice taken, and in either way sorrel is an excellent antiscorbutic. The seeds are astringent, and may be administered in powder to restrain fluxes. The root dried and powdered possesses also the same quality, and checks overflowings of the periodical discharges, and other internal bleedings.

There are other kinds of *sorrel*, of nearly the same taste, and possessing the same virtues. One of these is called *sheep-sorrel*, and grows commonly on dry banks, being little distinguishable from the former but by it's inferiority in size. Another is large, with broad leaves, and is commonly called *garden-sorrel*, or *round-leaved sorrel*, and this is in all respects equal to the common kind. But besides these there is another plant, which though called a *sorrel*, differs so widely from all the other sorts, that it requires a separate description.

Wood-Sorrel.

THIS is a beautiful little plant, growing about wood-sides, and in shady watery

lanes. The root of this plant is long, slender, scaly, and fibrous, and the leaves spring in considerable numbers from it, standing three together upon a separate long and slender foot-stalk, of a reddish colour. Each of these leaves or divisions is in the shape of a heart, which is also indented, hanging downwards, and the three small ends drawing together on the summit of the stalk. The flowers, which are whitish, tinged with light purple, and most beautifully veined with a darker, consist of a single leaf divided into five parts, and stand also on single stalks, rising immediately from the root. The flowers are succeeded by large seed-vessels, which when ripe, burst asunder with the least touch, and the small round seeds are scattered about. It flowers in April and May.

The leaves are supposed to excel all the other sorts of *sorrel* in medicinal virtues. Beaten up with three times their weight of sugar they make an excellent conserve, or an admirably agreeable syrup may be made from the juice of them. Either of these is good to quench thirst in fevers, to alleviate violent heat, and excite an appetite, as they strengthen the stomach. This plant has also the same virtues with the other sorts, and is equally recommended as a remedy for the scurvy, to sweeten the blood, and to remove those obstructions which occasion jaundice, dropsy, and other disorders of the like kind.

Southernwood.

THIS shrub, though a native of the warmer parts of Europe, flourishes as well in our gardens as in it's natural soil. The stem is woody, tough, and covered with a rough brown bark. The leaves are divided into fine tender parts; these are of a pale green colour above, and hoary beneath, and have a strong, but not disagreeable smell. The flowers, which grow in

numbers on the tops of the branches, consist of little heads of a yellowish green colour, and contain small, longish, heavy seeds, without down, and of a pale brown colour.

The leaves and tops of the young branches are used medicinally in decoction, which is said to be good against worms, but it is a very unpleasant medicine, though it may be made less disagreeable in the form of a conserve, and in this way is recommended against nervous and hysteric complaints. This plant was formerly esteemed an antidote against poisons, the bites of venomous reptiles, and mortification, and it has been supposed to possess diuretic qualities; but it is now chiefly used in warm ointments and fomentations.

Sow Thistle.

THIS weed grows every where under hedges, and by foot-paths, and is troublesome in our gardens. It rises two or three feet high. The stalk is round, hollow, angular, channelled, upright, and of a green colour. The leaves are long, stiff, rather narrow, but pretty deeply indented about the edges; the points made by the indentings terminating in prickles. When any part of the plant is broken, it emits a milky bitter juice. The flowers, which are large and yellow, and resemble those of *dandelion*, but are less, and of a lighter colour, grow several together on the tops of the branches, and stand in scaly cups, which contain downy thin flat seeds. The root is long, large, and white.

The leaves are used medicinally, but are best fresh-gathered; a strong infusion of them operates by urine, and removes obstructions; they are sometimes eaten in salads, but the infusion is more efficacious. There are several other kinds of *sow thistle* found in common with this, but as they all possess the same virtues and this has them

most in perfection, it is not necessary to mention the others, which differ only in size, and in being without prickles.

Speedwell.

THIS plant grows commonly in dry pastures, and on heaths, the stalks seldom exceed six or eight inches in height. The leaves are short and oval. The stalks cannot support themselves upright, but trail along the ground, shooting out fibres at their joints, which root again, and continue the growth of the plant. The leaves are of a light green colour, somewhat hairy, and indented round the edges. The flowers, which are small, and consist each of one blue or purple leaf, grow in slender spikes, which rise from the bosoms of the leaves, and these flowers are succeeded by seed-vessels, shaped like those of *shepherd's purse*, filled with very small leaves. The root is a bunch of fibres.

The whole herb is used, and though it is best fresh, does not lose all its virtue by being dried. An infusion of it drank in considerable quantities, operates diuretically, removes obstructions, and promotes the periodical evacuations. An opinion once prevailed, that this plant would cure the gout, but it has been long exploded. It has with better authority been prescribed as a pectoral, and is esteemed serviceable in hectic and consumptive coughs.

Spiguel.

THIS plant grows wild in some parts of the north of England, and rises two or three feet high. The stalks are round, channelled, and somewhat branched. The leaves, which are large, are divided into finer parts than almost any other plant, but are most like those of *fennel*; they are of a very dusky dark green colour. The flowers

ers are small and white, and stand in clusters at the tops of the stalks, which are cloathed with a few small leaves. The seeds are of a larger size than those of fennel, channelled on the backs, and growing two together. The root is about the size of a finger at the largest part, it is of a brown colour, and runs deep into the earth, the head of it is covered with stiff hairs, which are the remaining fibres of the stalks of former leaves.

The root only is used medicinally, a decoction of it expels wind, and relieves colic and griping pains: it is also diuretic, and held to be serviceable in the strangury and gravel. It was formerly esteemed a remedy for pestilential disorders.

Spinage.

THIS herb is well known in kitchen gardens. It sometimes reaches the height of two feet. The stalk is round, thick, and fat or full of juice. The leaves are broad and cleft at the bases, and resemble an arrow head. The flowers are greenish, and without beauty, but this is one of those plants which are distinguished into male and female. The seeds, which are large and prickly, growing only on particular plants. The root is white and long.

The leaves are commonly eaten at table, and are esteemed very wholesome; the juice of them is recommended as a medicine operating by urine, and relieving the gravel. The leaves are cooling and opening.

Spleenwort.

THIS is a plant of the fern kind, but not resembling any of them in form. It grows upon old buildings, and about stone walls, in the western parts of England. The root is fibrous, and from this the leaves spring in great numbers together, though

each is a distinct plant; they are about five inches long, narrow, and deeply but very irregularly indented on each side, they are of a greenish colour on the upper surface, but brown on the under part, and covered with small dusty seeds: when they first rise from the root they are folded inward, so that the under part only appears, and they have more the appearance of some insect than the leaf of a plant.

The whole plant is used medicinally; it removes all obstructions of the liver and spleen, and disorders arising from these causes; the powder of the dried leaves has been reported to cure the rickets, but this wants confirmation. It may be administered in tea or infusion, and is best fresh, but is not without virtue in the dry state.

Great Spurge.

THIS plant is not one of the many kinds of *spurge* which grow wild in England, but a different species. It is a native of Germany, and to be found in our gardens, where it grows two or three feet high. The stalk is round, strong, of a reddish colour, and divided into many branches. The leaves are long, narrow, smooth, and of a pale green; they are broadest at the extremities. The flowers grow on the tops of the branches, are small and of a pale yellow; they are followed by triangular seed-vessels, which contain each three round seeds. The root is very large, in some instances as big as a man's arm, but divided into many parts, the whole consists of a solid substance, covered with a thick bark. Every part of the plant, when broken, emits a milky acrid juice, which burns the mouth and jaws for a very considerable time.

The bark of the root is used medicinally as a purge, but even in that state it is very violent in it's operation: it operates not only by stool, but by vomit, and is recommended in the rheumatism and dropsy; but it contains

tains such a corrosive quality that it is apt to injure the stomach and bowels, and it is only very strong constitutions that can bear the use of such a remedy.

The lesser Spurge.

THIS, though a less plant than the former, is rather stout, it is a native of the same part of the world, and also of France, but is no stranger in our gardens. It does not grow above a foot high. Its root is much smaller than that last mentioned, and the leaves are long, and very narrow, but round at the ends. The stalks are large, round, red, and divided into branches; on the tops of which stand the flowers, which are small and yellow, and grow in clusters, the seed vessels are large and triangular. The whole plant, like the larger sort, is full of an acrid milky juice, but the root more than the other parts.

This is also violently purgative and emetic, and the bark of the root is only used, and though it operates with somewhat less violence, yet even this is too rough for most constitutions. The virtues ascribed to this species of *spurge*, are the same as those attributed to the other sort.

The Star Thistle.

THIS plant grows wild on heaths and commons, and by highways, but is not very frequently found. It is about two feet high. The stalks are round, solid, whitish, and very much divided into branches. The greater part of the eaves spring immediately from the root, which they encompass in a kind of circle, spreading on the surface of the ground; they are of an oblong form, and divided or cut along the sides quite to the middle rib; the few leaves which grow on the stalk are smaller. The

flowers stand very thick upon the branches, they are of a red or purplish colour, are of the form of the flowers of thistles, and growing out of scaly heads, each scale terminating in a sharp thorn. The flowers go off in down, which contain flat white seeds. The root is single, about the size of a man's finger, runs deep into the ground, and is covered with a thick bark or rind.

A strong infusion of the root is recommended for the stone, gravel, and colic, and is also prescribed in the jaundice, and other disorders occasioned by obstructions, which it removes, operating by urine.

Staves Acre.

THIS plant is a native of Italy and other warm countries, and is kept in many gardens in England. It is from two feet to two feet and a half high. The stalk is large, round, strong, erect, and somewhat downy or hairy. The lower leaves are large, and like vine leaves, but of a rounder figure, and divided deeply into seven parts, each sharp-pointed and indented at the edges; they are of a deep green colour, and stand on long, slender foot-stalks. The flowers grow in spikes at the stalks, and are of a deep blue, and large, and resemble very much the flowers of *larkspur*. The flowers are succeeded by crooked, sharp-pointed seed-vessels, containing two or three rough angular brown seeds of a hot acrid taste.

The seeds are the only part used in medicine, and they are given in small doses for the rheumatism and the venereal disease; but they operate so violently by vomit, stool and spittle, that few people venture upon them. These seeds powdered, are commonly used to destroy the vermin which infest children's heads that have been kept uncleanly, and this is done by sprinkling it on, and combing it into the hair.

Golden Stæchas.

THIS plant is a native of the warmer parts of Europe, being found plentifully in Spain, the south of France, and some of the islands in the Mediterranean sea, and is kept in English gardens. It is a shrub of three or four feet high, and preserves it's verdure all the year. The stem is woody. The leaves, which are very numerous, on long slender stalks, are long, narrow, less than those of lavender, and hoary, especially on the under side. The flowers are clusters of small chaffy, scaly heads, of a fine shining yellow, and stand at the tops of the stalks: they retain their colour for a long time, if they are carefully preserved. The whole plant has an agreeable scent, if rubbed between the fingers, nor does this lessen by it's being dried.

The tops of the leafy stalks are used medicinally: these being fresh-gathered, and given in tea or infusion, operate diuretically, and remove obstructions. It may be given with success in jaundices, and obstructions of the periodical discharges.

The Strawberry Plant.

THIS plant is equally well known in it's wild state and in gardens. It has small reddish roots, which have fibres at every joint, and these take root and propagate the plant. From these roots spring the leaves, which stand three together on every footstalk, and are large, broad, sharp at the points, and indented about the edges. At their first springing up they are folded together, but soon expand, and appear full of veins. The flowers are white; they stand four or five together upon a long foot-stalk, rising immediately from the root. They are white, each composed of

five leaves moderately large, and have several yellow threads in the middle. The fruit is well known; when ripe it is red, of a pleasant, tart, grateful taste, and delightfully fragrant smell, with many small greenish seeds on the outside of it. An infusion is made of the fresh leaves, to wash or gargle sore mouths, or ulcerated throats or gums. This infusion is said to be diuretic, and to be serviceable against the jaundice. The fruit is cooling and wholesome, and may be eaten to quench thirst and allay heat in fevers.

Succory.

THIS plant is only to be met with in gardens, where it grows near a yard high, but is not remarkable for beauty. The stalk is round, angular, channelled, large, strong, and hairy. The principal leaves spring immediately from the root, and these are long, narrow, deeply indented, of a bluish green, and also somewhat hairy: they are broadest at the bases, where they in a manner encompass the stalks. The leaves on the stalks are smaller, and among these grow the flowers, which resemble in shape those of dandelion, but are of a lively blue colour, and grow from the sides, and not from the tops of the stalks. The seed is long, and of a brown colour, but does not grow among down; it flowers in June. The root is thick, but tapers; it is of a brown colour on the surface, but white within, and full of a bitter milky juice.

The root is used medicinally, and an infusion of it is prescribed to remove obstructions and cure the jaundice. A decoction of the whole plant fresh-gathered, operates freely by urine, and is recommended as a remedy for the gravel, stone, and suppression of urine. It also gently promotes the monthly discharges. The seeds are said to be cooling.

Sumach.

THIS shrub is a native of Italy, Spain, and other warm countries, but is common in gardens and plantations in Great Britain; where, however, it seldom grows more than ten or twelve feet high. The wood is brittle, and the bark of a dark brown. The leaves are winged and very elegant, each consisting of many pairs of smaller, terminated by an odd one. These taken singly are oblong, of a deep green, and indented at the edges, and somewhat resemble elm leaves, only that these are rather longer. The flowers, which grow in very large clusters, are white, and are succeeded by small, round, flat, hairy seeds, of a harsh astringent taste. There are other sorts of *sumach* to be found in the gardens of those curious in botany; but this is the kind which is allowed to possess the most medicinal virtues, though it is by no means the most beautiful.

The seeds and tops of the young shoots are both used, the former, dried and powdered, is recommended to check purgings, and to stop internal hæmorrhages, and the overflowings of the monthly discharges.

The fresh tops are prescribed in infusion, to strengthen the stomach and bowels. The bark of the root has in some measure the same qualities, and both the tops, seeds, and roots, were formerly supposed to resist putrefaction, and stop the progress of gangrenes and mortifications.

Swallow-wort.

THIS plant is also a native of warmer climates, but is very common in our gardens. The root is spreading and fibrous, and immediately from it spring many round, slender, jointed stalks, of a dark colour, and from one to two feet

high. The leaves, which are round at the bases and sharp at the extremities, are about three inches long, and half the breadth at the widest part. They are of a dark green colour, and stand in pairs at the joints, on very short foot stalks. The flowers are small, white, and star-shaped, consisting each of five leaves, and are succeeded by two pods growing together; but these seldom appear, and scarce ever bring seeds to perfection in this climate.

An infusion of the fresh root is recommended as a remedy for the jaundice and dropsy, as it works by urine and removes obstructions. Dried and given in powder, it promotes perspiration, and is given in malignant and pestilential fevers. It was once esteemed a very powerful antidote to poisons, venomous stings, and bites.

Tamarind Tree.

THIS tree is a native both of the East and West Indies, where it grows to a very considerable magnitude. It is kept in many gardens and plantations in England. The trunk is covered with a pale-coloured rough bark; the branches with one of a lighter colour and smoother. The leaves are winged, and each composed of a great many pairs of smaller, set on a common rib, but without the usual odd one at the end. The several small leaves are oval, of a very light green, inclined to white or hoariness. The flowers are large, and stand in clusters of eight or ten together on the young shoots, and very handsome, each being composed of four yellow and three white leaves, the latter frequently stained with red or purple. The fruit is a flat pod, broad, hard, and of a brown colour, with regular knobs, or protuberances like bean-pods; these pods are from two to four inches long, and contain a pleasant acid pulp, and hard brown seeds or stones, of a bright chestnut colour, connected together

Spec

gether by many fibres. The pulp, strings, and seeds, are brought to England, and are the tamarinds of the shops. The pulp is separated for use. It is a gentle and most excellent purge, operating also by urine; it is a remedy for the jaundice, and other disorders occasioned by obstructions. The pulp is useful also to moisten the mouth and quench thirst in fevers; and, mixed with water, makes an admirable cooling drink for all inflammatory disorders.

Tamarisk.

THIS tree is found wild in Spain and the south of France, and is kept in gardens in England, where it seldom arrives at any considerable size, though it is much larger in it's native climate. The bark of the trunk is of a dark brown, and rough; and that of the branches lighter coloured, and smooth; and the young shoots are of a full but bright chesnut colour, and very slender. The leaves are of a fine lively green, elegantly and regularly divided into small parts: they somewhat resemble those of cypress, but are thin, smooth, and delicately tender. The flowers, which are very small, of a pale red colour, and composed each of five leaves, stand in spikes at the extremities of the young shoots, and grow close together; and as several of these spikes sometimes rise from the same branch, they make a conspicuous and pleasing appearance. The flowers are succeeded by very small seeds, lodged in a downy substance.

The bark is used medicinally dried, and the tops of the branches fresh, and both possess the same virtues; the former is to be given in decoction, the latter in a light infusion, or tea; they are equally good to remove obstructions, promote the periodical evacuations, and cure the jaundice and rickets. The wood and bark were for-

merly esteemed specific against disorders of the spleen.

Garden Tanfy.

THIS plant is only found in gardens; it rises about two feet high; the root is large, stringy, and fibrous; the stalks are round, erect, and of a light green colour; the leaves are large, yellowish, and winged; each being composed of several pairs of smaller leaves disposed on each side of a common rib, and terminated with an odd one: each of these is narrow, long, pointed, and indented at the edges. The flowers, which grow in large clusters at the summits of the stalks, are round, yellow, and naked: the whole plant has a strong, fresh, chearing smell.

A strong infusion of the leaves, freshly gathered, operates by urine, and removes obstructions of the liver, spleen, and other intestines; it also gently promotes the monthly discharges. The flowers, dried, powdered, and mixed with treacle, are commonly given to destroy worms, and very frequently produce that effect.

Wild Tanfy.

THIS plant grows wild about way-sides and commons, in different parts of England; it rises to no considerable height, the stalks creeping upon the ground, and taking root at the joints. The stalks are round, and of a reddish colour, and the leaves on these are very large, and like those of the plant last described; each composed of a great many pair of smaller, set on each side of a common rib, and terminating with an odd one. They do, indeed, in most respects resemble the leaves of garden tanfy, the smaller leaves of which they are composed being also oblong, narrow, and

and indented; but these are of a hoary or silvery green on the upper surface, and perfectly silvery or hoary beneath. The flowers, which stand on short foot-stalks, are large and yellow, not wholly unlike the flowers of crow-foot, but much more elegant.

The leaves only are used medicinally, and a strong infusion of them is said to be efficacious in stopping the bleeding of the piles, and bloody stools. A light infusion of tansy, sweetened with honey, is recommended as a gargle for sore throats.

Tarragon.

THIS is a garden plant, and seldom grows above eighteen inches high; the stalk is round, erect, green, and much branched; the leaves, which stand irregularly and in great numbers on the branches, are long and narrow, somewhat resembling those of hyssop, but sharper pointed, and of a dark green colour. The flowers, which are small and greenish, and in form like those of southernwood or wormwood, but fewer and on longer foot-stalks, stand in spikes at the extremities of the stalks. The whole plant has a smell somewhat like fennel, but it is strongest in the leaves.

This plant is said to be warm and cordial, and to be useful in expelling wind. An infusion of the fresh tops operates as a diuretic, and gently promotes the monthly discharges.

Teazle.

THIS is a tall stout plant, common in banks, under hedges, and by road sides; it sometimes rises six feet high. The stalk is single, large, white, very strong, somewhat prickly, and very much branched towards the top. The leaves

grow two together, and encompass the stalk at the base, forming a hollow there which catches and retains the rain, and these leaves also are prickly on the under parts along the ribs. The flowers, which are small and reddish, grow on heads as large as an apple, and of an oblong form, these are of a pale colour. The root is thick and fibrous, and the taste of it bitter. An infusion of this root, which is best fresh, strengthens the stomach, and excites an appetite. It is also recommended as effectual in removing obstructions of the liver, and curing the jaundice. The water, which stands in the hollow of the leaves, has been supposed to be a good eye-water in cases of inflammations, and it is also esteemed cosmetic, and powerful in taking away freckles.

There is also another kind of teasle, cultivated for the sake of the heads, which is used in dressing cloth; this possesses the same virtue as the other, nor do they differ very materially in appearance.

Blessed Thistle.

THIS plant, which is a native of the warmer countries of Europe, was once in much greater esteem than at present, though it is still raised with us in gardens for medicinal uses. The root is small and woody, perishing continually. The stalk rises two feet high, and is reddish, slender, very much branched, and so feeble that it is scarce able to keep erect under the weight of its numerous leaves and heads. The leaves, which are long and narrow, and very deeply and unevenly cut in on both sides, are of a dull green colour; they end in a point, appearing like a thorn, but too tender to be hurtful. The flowers, which grow on the tops of the stalks, in roundish heads, surrounded with leaves smaller and less divided than those on the lower part of the plant, stand in scaly heads

or

or cups, which are somewhat prickly, and each of the cups of the flowers ends in a long brown thorn, indented on both sides like a saw.

The seed is long, round, and channelled, and of a brown colour; it's appearance is rendered peculiar by a bristly crown on each seed.

It is esteemed a good stomachic bitter, and a decoction of it, taken in considerable quantities, is used as a vomit; less quantities, it is said, create an appetite, prevent sickness, and check retchings. The leaves, dried and powdered, have been recommended to destroy worms; and it was formerly accounted cordial and perspirative, and prescribed in fevers of all kinds; but this use of it is now discontinued.

Milk Thistle, or Lady's Thistle.

THIS plant grows commonly by roadsides and on banks, and it's appearance is remarkably elegant. The leaves, which rise immediately from the root, are in some instances two feet long, and more than one broad, of a beautiful dark green, spotted or variegated all over in irregular figures, with a milky whiteness; the leaves are prickly and indented deeply at the edges, and they spread themselves round the root, in a compass of more than a yard diameter, but lying near the ground, are apt to be over-spread with dust. In the centre of the leaves rises a single stalk which grows four or five feet high, is round, thick, very strong, erect, and divided at the top into several branches. The leaves on the stalk resemble those from the root, and are variegated with white in the same manner. At the tops of the stalks grow the flowers, which differ only in size from those of other thistles, being twice as large, and much more beautiful. The flowery part is of a dark but fine purple. The head itself consists of beautiful scales, each terminat-

ing in a single and very strong prickle, and these scales are perfectly regular in their size and order. The root is long and large, running deep in the ground; the seeds are flat, oblong, and white, and inclosed in a considerable quantity of down.

An infusion of the fresh roots and seeds is recommended to remove obstructions, and cure the jaundice and dropsy: it operates by urine. The seeds, in an emulsion with barley-water, are said to give relief in pleurifies. The young leaves, with the prickles cut off, are sometimes boiled by way of cabbage, and are highly extolled both for wholesomeness and delicacy of taste.

Thorn Apple.

THIS plant is a native of warm climates, but is cultivated in our gardens; and though sometimes found apparently wild, it's growth is accidental, and from seeds which have been scattered from gardens.

The root is white, thick, somewhat woody, branched, and fibrous, the stalk rises two or three feet high, and is round, large, hollow, and divided into many branches. The leaves, which are very large, of an oblong shape, and of a lively green colour, are divided at the edges, and somewhat resemble those of common nightshade, though larger and of a very offensive smell. The flowers are very large, white, long, and hollow tubes, but they open at the brims, and are formed into angular points. The fruit or seed-vessel is nearly as big as a large walnut, and is covered all over with long stout upright thorns; as these ripen they divide into four parts, and opening disclose flat black rough seeds. It flowers in July.

The leaves of this plant are sometimes used as external applications to burns and inflammations, but this is not always prudent, as they are in some instances too cooling

and repellent. The roots and seed have a tendency to promote sleep; but opium is a medicine so safe, and it's operation so universally known, that these roots and seeds are seldom or ever used at present.

Goat's Thorn.

THIS prickly shrub is a native of the east, at least there only it produces gum, though it is also found in France and Italy, and in England it is cultivated in gardens. It does not grow above two or three feet high, but it spreads much, and is very full of branches. The stem is tough, firm, and woody, and is covered with a rough bark of a light colour. The branches are also tough, and the bark of them of the pale colour, but smoother. The leaves, which are long and narrow, consist each of several pairs of smaller, set on a middle rib, which is continued beyond them, and terminates in a thorn, and when these pairs of leaves fall off, the whole rib appears a white thorn of that length. The flowers grow singly towards the tops of the branches, and are white, of the figure of a broom flower, but smaller. The pods, which follow, are short and flat, and contain two or three small round seeds, but they are seldom produced in this country.

The plant itself is not used in medicine, but the gum which is sold in the shops under the names of *gum tragacanth*, or *gum dragon*, flows from the root or the lower part of the trunk of this shrub, in the hottest seasons of the year.

This gum is imported into England from Turkey, in twisted and curled pieces of different sizes; it's appearance is sometimes white and sometimes yellowish, but the former is to be preferred; a small quantity of it in water produces a very strong jelly. It is recommended in coughs arising from de- fluxions of sharp humours, and is said to lessen the acrimony of urine, as well as of

the bowels, and to correct sharp stools; but it is a disagreeable medicine. It is difficult to powder, and is not pleasant even in mucilage. A very thin jelly of it is said to be useful for inflammations of the eyes.

Thoroughwax.

THIS plant grows wild in corn-fields, and reaches sometimes the height of three feet. The stalk is round, strong, erect, of a whitish colour, and, towards the top, divides into several but not many branches. The leaves are broad, and of an oval figure, not indented, and the stems run through them towards the lower parts, for they have no foot-stalks. The leaves are of a bluish green colour. The flowers, which are small and yellow, stand in tufts or clusters of five in each at the summits of the branches, with an equal number of leaves placed under each tuft, of which the three outermost are the largest. Two oblong channelled seeds succeed each flower. The root is small, woody, and fibrous.

The leaves are applied externally by common people to wounds, bruises, and contusions; the seeds are sometimes administered inwardly, to prevent ill consequences from internal hurts.

Thyme.

THIS plant is universally known, being kept in every kitchen garden. The stalk, which is hard and woody, seldom exceeds eight or ten inches in height; the branches are extremely numerous. The leaves, which are small and of a dark-green, stand in pairs at the joints. The flowers grow in a kind of loose spikes at the tops of the stalks. The root is a bunch of fibres, round a woody continuation of the stem. The whole plant has a strong agreeable smell, and a warm aromatic taste.

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An infusion of the fresh tops of thyme, is esteemed serviceable in asthmas and such oppressions of the lungs as are occasioned by tough phlegm. It is also recommended as a remedy for nervous complaints; but the wild thyme, called mother of thyme, is preferable for this purpose. The oil made from thyme cures the tooth-ache, a drop or two of it being put upon cotton, and applied to the tooth; and this is generally substituted for oil of origanum, or marjoram.

Toad Flax.

THIS plant is commonly found wild on banks and hedges, and rises a foot and a half high. The stalk is round and large, strong, erect, and not branched. The leaves, which stand so numerously on the stalks, as almost to cover them, are oblong, narrow, smooth, not indented at the edges, but pointed at the ends, and of a bluish green colour. The flowers are yellow, and grow in a tuft, or short and thick spike, on the tops of the stalks; they are of considerable size, and the fore part is said to resemble the human mouth, the lower part of which is of a darker, and the upper of a lighter colour; they are also spurred or heeled: each flower is succeeded by a seed-pod, round, but divided into two parts, each containing several small black seeds. It flowers in July, and the root is small and creeping.

An infusion of the tops, fresh-gathered, or of the whole herb dried, is opening and diuretic, and is recommended against the jaundice, and all internal obstructions. It also gently promotes the periodical evacuations. A cooling ointment may be made, by boiling the fresh plant chopped to pieces in lard, till it is crisp, and then straining it off. It will be of a fine green colour. This ointment is said to be excellent for the piles.

Tormentil.

THE root of this common wild plant is large in proportion to the size of the plant, sometimes crooked and knobby, of a reddish colour within, but brown without and fibrous. The stalks are seven or eight inches long, round, and of a brownish colour, but too slender and feeble to be upright. Five and sometimes seven leaves stand together at a joint, which all rise from the same base; these are narrow, long, pointed, and indented at the ends, and of a dark green colour. The flowers, which are composed each of four leaves, are small, but of a beautiful shining yellow, grow on slender foot stalks, and resemble in shape and colour the flower of crowfoot, but are of a much less size. The seed is small, and stands naked on the cup. It is found on commons, and by wood sides, and flowers in the summer months.

The root only, is used medicinally; it is best dried, and may be given in powder or decoction. The powder is recommended to restrain diarrhæas and dysenteries; it is also good against the bleeding of the piles, bloody stools, and the overflowings of the monthly discharges. This root, cut in pieces, and added to hartshorn drink in the boiling, in the proportion of an ounce to a pint, gives it a pleasing colour, and communicates it's virtues. The root is said to be cordial, as well as astringent, and to promote perspiration gently. And the decoction just mentioned is thought serviceable in such fevers as are attended with purgings, which it checks moderately, and at the same time abates the fever. A gargle of this decoction is said to fasten teeth which are loose, and to help the falling of the uvula.

Trefoil.

THIS plant is common in our meadows and fields, and is universally known. It grows ten or twelve inches high; the stalk

stalk is round, but not upright. The principal leaves rise immediately from the root, and stand three together, on long hairy foot-stalks, each of these is of an oval figure, but pointed; they are of a deepish green colour above, but paler underneath, and have generally a white spot in the center of each leaf. The leaves on the stalks are nearly of the same form, but considerably less. The flowers, which stand at the tops, in a sort of short, round, thick spikes, are small, and of a purple colour; they are succeeded by little flat pods, each containing two or three small round yellowish seeds.

An infusion of the flowers, fresh-gathered, is said to be good for fluxes and dysenteries, and to restrain the bleeding of the piles; the infusion of the flowers operates diuretically, and is said to relieve the strangury and heat of urine. They are also sometimes applied in cataplasms, or poultices to inflamed tumours.

The Turnep.

THIS plant is well known in fields and gardens; the root is generally round and white, though sometimes purplish on the upper part. The leaves are of considerable length and breadth, and of a dark green, deeply cut at the edges, and blunt and round at the extremities; the stalks are three feet high, round, smooth, strong, erect, and branched, and are furnished with smaller, smooth, and undivided leaves; the flowers are four-leaved, yellow, and of inconsiderable size; they stand in long spikes, and are succeeded by long slender pods, containing many round black seeds.

The roots are commonly eaten, and are esteemed wholesome; they also possess medicinal virtues: they may be cut into slices, and stewed, or baked, with sugar, or sugar-candy, till their juice, with the sugar, becomes a syrup; and this is a good pectoral medicine, and serviceable to relieve coughs and shortness of breath; and

a poultice of these roots is an admirable remedy for chilblains, which may also be washed with the water in which they have been boiled; and these applications seldom fail of giving relief.

Turpentine Tree.

THIS tree is a native of the east, and of some of the islands in the Levant, where it grows to a great size, but in the plantations in England, where it is frequently met with, it never rises to any great height. The bark is brown and rough; the branches, which are numerous, stand irregularly: the leaves consist each of a double row of smaller, which are oval, and set opposite each other on a common rib, terminating in an odd one. The leaves are of a dark shining green; the flowers, which are small and purple, appear only in the form of clusters of threads in the early spring before the leaves. They are succeeded by longish hard nuts, with kernels of a resinous taste and smell; the whole shrub has also a similar smell.

The *Cbio turpentine*, the most esteemed of all the balsams of this kind, is obtained from it in the island of the same name. It is here of a whitish colour, but that which is procured in the island of 'Cyprus' is browner. It is highly esteemed as a pleasant and excellent medicine, operating by urine, and affording relief in coughs, and other disorders of the lungs: it is also prescribed for the stone, gravel, and retention of urine, and is given to stop the whites, and discharges occasioned by weaknesses after venereal complaints.

Tutsan.

THIS plant grows wild in woods and under hedges, and is very common in some parts of the kingdom, and particularly

larly in the west of England, though it is also kept in many gardens: it grows two feet high; the stalks are strong and smooth, of a reddish colour, generally erect, and only branched into a few young shoots towards the top. The leaves, which stand in pairs at the joints opposite to one another on short foot-stalks, and at no very considerable distance, are very large above, though smaller below, and of a shape inclining to oval: their colour is a brownish green; they are smooth, and not indented at the edges. The flowers grow several together on the tops of the stalks, and are but small; each of them consists of five yellow leaves with threads in the middle, of the same colour, which emit a reddish juice on being pressed; they somewhat resemble the flowers of Saint John's wort. They are succeeded by a kind of berry, green at first, but turning black when ripe, and containing a great quantity of small seeds and purple juice. The whole plant, in the close of the summer, sometimes appears of a beautiful blood-red colour, but this is only where it is exposed to the sun. The root is small, reddish, fibrous, and irregular; it creeps just below the surface of the ground. The leaves dried have a very agreeable smell.

The leaves are strongly recommended even by modern writers as a cure for fresh wounds. The young and tender ones, which grow on the young shoots at the tops of the branches, are to be preferred, and are directed to be bound upon the wound; in which way they are said to stop the bleeding, and effect a speedy cure. An infusion of them taken inwardly is also prescribed as a remedy for internal wounds and bruises.

Two Blade.

THIS pretty plant is commonly found in our meadows in the early summer months. It rises to the height of a foot;

the stalk is round, green, brittle, and erect; it bears only two leaves, which are of considerable length and breadth, of an oval form, and stand opposite to each other, somewhat less than half way up the stalk. The flowers, which are small and greenish, and somewhat resemble those of the orchis, stand in a long spike; the seeds are very small, and the root is slender, white, and fibrous.

A strong infusion of the leaves and stalk, fresh-gathered, is recommended to restrain the bleeding of the piles; and the juice, or an ointment made with it, to be applied externally, for the same complaint.

Garden Valerian.

THOUGH this plant is a native of the Alps, and other mountainous parts of the continent of Europe, yet it is common in our gardens. It grows three feet high; the stalk is erect, round, channelled, and hollow; the leaves, which spring immediately from the root, are of considerable size, and some of them are divided deeply on each side, though others are entire; but they all terminate in obtuse points, and are not indented at the edges. Those on the stalks are smaller, and are all deeply cut without exception: the stalks divide as they rise into several branches, each of which has a leaf at it's separation from the stem; at the tops of these branches stand the flowers in large tufts or clusters. They are small and white, each consisting of a long narrow tube, and are succeeded by channelled seeds with downy tops. The root is about the size of a man's finger, and is fibrous, and of a brown colour; it creeps just under the surface of the ground, and has an appearance like a caterpillar with many legs; it emits a strong smell, and particularly when it is dried.

This root is used medicinally. A decoction

coction of it is given in malignant and contagious fevers, and in suppressions of the monthly discharges, and other obstructions. It acts as a perspirative, and works also by urine. It is cordial to the stomach, and useful in all nervous disorders.

Wild Valerian.

THIS tall plant is a native of Great-Britain, and is found in moist woods, wet ditches, and other watery places; it is not wholly unlike the *garden valerian* in it's figure and growth, and possesses great virtues. It rises a yard high. The stalks are round, channelled, erect, hollow, and of a light green colour. The leaves are large and handsome; they are winged, and consist each of several pairs of smaller, set on a common rib, with an odd one at the end. These wings are long, narrow, indented at the edges, of a pale green colour, and somewhat hairy. The flowers stand in large tufts or clusters at the tops of the stalks, and are small and of a pale purple colour, and the seed resembles that of the garden kind. The root is white, and is composed of a great many thick strings or fibres. It is of a very strong and disagreeable smell, and this is much increased by it's being dried.

The root is used medicinally, and; given in powder or infusion, is an admirable medicine in nervous disorders. It is even said that it will cure the epilepsy; but it's good effects in head-aches, depression of spirits, and tremblings of the limbs, are unquestionable; in such cases few medicines are so efficacious.

Vervain.

THIS is a wild plant found commonly about path-ways, and by the roadside. The root is white, slender, spreading

and fibrous. It grows two feet high. The stalks are numerous, square, strong, somewhat hairy, and frequently brown or purplish. The leaves, which grow in pairs at each joint, are of an oblong form, narrow, cut in at the edges, of a dull green colour, and of a wrinkled and rough appearance. The flowers, which are composed of one leaf cut into five parts, are white, tinged with purple; they grow in a long spike, on which are flowers, buds, and the remaining cups or seed-vessels, but only two or three flowers are open at a time. Each seed-cup contains four small longish seeds.

An infusion of the fresh-gathered tops is recommended to remove obstructions of the liver and spleen, and to relieve the jaundice, dropsy, and gout. It is a cordial to the stomach, and nervous complaints are said to be removed by a continued use of it. It has been also highly extolled of late for the cure of scrophulous complaints, and a treatise hath been written to recommend the use of it externally and internally.

The Vine.

THIS plant or shrub is too common in our gardens to require a very particular description. It is weak, and unable to support itself. In this country it generally grows against walls, but in those countries where it is cultivated for the purposes of making wine, it is trained in espaliers; the trunk and branches are covered with a rough bark; the branches are long and straggling; the leaves are round in the whole figure, but are deeply cut into five or seven divisions. The flowers are scarce observable. The fruit is round or oblong, juicy, and produced in large bunches. Though no part of the *vine* itself, as it grows with us, is used medicinally, the several kinds of wine produced from the grape are, in many disorders, medicines of themselves,

themselves, the red wines in particular in all putrid diseases; the dried fruit also, in the form of raisins and currants, are in constant use; the different kinds of raisins are cured differently, some being left to dry on the vines after the stems of the bunches are almost cut asunder; and others, such as the Malaga, being cut off, dipped in a boiling lye made from the ashes of vine-cuttings, and then exposed to the sun to dry; but these and currants possess the same virtues, are good in coughs, tenderness of the lungs, and consumptions. They are also great sweeteners of the blood, and are a very wholesome food with bread or biscuit for persons of scorbutic or scrophulous habits.

The best vinegar is also the produce of the grape, being the wine turned sour; and spirit of wine and brandy of the very best kinds are procured from wine by distillation. The substance called tartar, of which that most excellent medicine the cream of tartar is made, is only the salt particles of the grape, which adhere to the wine casks; so that we are indebted to the wine for more and better medicines than to any other vegetable production whatsoever.

Violet.

THOUGH this beautiful plant grows wild in our woods and hedges, yet is its simple fragrance superior to all the richest perfumes of the East. It is a small, low, creeping plant, and even its flowers are hid in obscurity. The stalks are round, creeping, and of a green colour; they seldom become erect, but spread themselves upon the surface of the ground, and take root at the joints. The leaves spring from these rooted parts; they are large, and stand on long foot-stalks. They are of the shape of an inverted heart, indented round the edges, and of a dark-green colour. The flowers, each of which consists of five

leaves, are of a deep and beautiful purple, with a spur or heel of the same colour; they stand singly on slender foot-stalks which rise among the leaves, and are covered by them. The flowers are used medicinally; boiling water is to be poured upon them in a quantity just sufficient to cover them; and, after standing twelve or eighteen hours, it is to be strained off; sugar is then to be added to it in the proportion of two pounds to a pint of the liquor, and this being melted over the fire, makes the syrup of violets. This is an excellent gentle purge for children, and good in pains of the breast and lungs, being cooling and moistening. The leaves, dried, are used in decoctions for clysters, and make an ointment for inflammations. An infusion of them operates by urine, and is esteemed a remedy for the stone and gravel, but the seed is preferred for these complaints.

Viper's Grass.

THIS tall plant is a native of the warmer parts of Europe, but is kept in our gardens. It rises three feet high; the stalk is round, large, erect, and strong; the leaves, which are numerous, stand irregularly on the stalks; they are long, narrow, pointed at the extremities, and not indented at the edges; they are of a light green colour. Those which spring from the root are also long and narrow, but they are much larger than those on the stalks. The flowers, which are of considerable size, resemble dandelion-flowers in shape, are of a most beautiful pale yellow colour, and stand at the tops of the branches; the seed is crowned with a white down; the root is long, large, and brown, and this is the part used medicinally. It is best fresh taken up and given in infusion; it is cordial and perspirative, and is esteemed good in fevers, though it is not at present much used.

Viper's

Viper's Bugloss.

THIS plant grows wild about our pathways, and on the banks of hedges and ditches; it rises a foot or eighteen inches high; the stalk is round, large, firm, erect, and somewhat hairy; it is of a light ash-colour, marked with spots and lines of blue, red, and purple. The leaves, which are long and narrow, are rough, and of a dark, dull green; they are broad and blunt at the points, and are without foot-stalks; the flowers are large, and of a beautiful blue, with red threads in the middle, and grow in spikes curled inwards; they are each succeeded by four rough seeds, which have been compared in shape and appearance to viper's heads. The root grows deep in the earth, but is not much branched; it is large, and of a brown colour. The leaves are used medicinally; those which grow from the root are preferred. An infusion of them is accounted cordial and perspirative; it is recommended in fevers, and against head-achs, and all nervous complaints. The ancients esteemed it not only an antidote but a preventive to the poisons communicated by the bites of vipers and other venomous reptiles; and they had a notion that holding the plant in the hand a short time would prevent the approach of any venomous creature for that day.

The Walnut Tree.

THIS tree is common in gardens, walks, and plantations. It grows to a considerable size, and is much branched. The leaves are of the winged kind, very large and long; each consists of a double row of smaller, with an odd one at the end. Each of the small leaves is of an oval figure, of a fading or yellowish green colour, and of an agreeable smell. The flowers are small;

these also are yellowish, and grow in loose catkins. The nuts grow two or three together, and are covered with a green thick coat, beneath which is a hard wrinkled shell, which is divided into two parts, and contains a white sweet kernel, inclosed in a thin, bitter, acrid skin.

The bark of the walnut tree is esteemed a good emetic, and may either be given green in infusion, or dried in powder; it operates easily and briskly. The skin which covers the kernel has an astringent quality, and is good against fluxes. The green nuts, preserved, have been esteemed a good antidote against infection; and the oil, expressed from the kernel, a powerful remedy for the gravel and stone.

Wall Flower.

THIS plant grows wild on old walls, and bears yellow and sweet-scented flowers. The stalks are numerous, woody, and about a foot high. The leaves are also numerous, long, narrow, and of a dull green colour. The flowers grow in loose clusters, at the tops of the stalks, and are of a moderate size. They are succeeded by long slender seed-vessels or pods, containing thin, flat, reddish seeds.

An infusion of the flowers, fresh-gathered, is recommended as a remedy for the headache, and other nervous disorders, and to promote the periodical discharges. Steeped in oil, they give it a cordial warmth, and render it serviceable in pains of the limbs; but these flowers are not at present in any great reputation.

Water Arrow-head.

THIS plant grows wild in ditches and watery places. It grows two feet and a half high; but the greatest part of the stalk is generally immersed in water, little more

more than the spike of flowers appearing above the surface of it. The leaves, which stand on round, large, and very long foot-stalks, are of a pleasing green, and are broad, bearded at the bases, and sharp at the points, resembling, according to it's name, an *arrow-head*. The flowers are of a glossy white, of moderate size, and are supported on a round thick stalk.

It has been customary with common people in many parts of England to apply these leaves bruised to inflammations, from an apprehension that they are cooling; but this is not to be depended on, nor is the external application of cooling medicines at all times safe.

Water Plantain.

THIS tall plant also grows commonly in waters and ditches, but has not the least resemblance of any kind of plantain, except in the form of the leaves; from which circumstance, however, it derives it's name. The root is composed of a large bunch of fibres, from whence rise, in spring, a number of oblong, broad leaves, of a beautiful green colour; in which particular it does not resemble plantain any more than in consistence, though, as we have already observed, the shape of them is like those of that plant. These leaves are perfectly smooth, of a shining surface, and crisp or brittle; they stand for many months before the stalk appears, and in this state it must have obtained the name. The stalk rises two feet or more in height, and is round, strong, and erect; it is divided at the top into a vast number of branches, those into others smaller, and even these last are subdivided. On the tops of the last divisions, the flowers, buds, and seed-vessels, appear at once, forming all together the appearance of a cone. The flowers are small and white, consisting each of three leaves;

they stand but a short time, and only a few are open together.

The seed is the part used medicinally; to procure which, the plant is to be suffered to stand till it is thoroughly ripe, when it must be cut up gently, and laid upon a table two or three days to dry; after which, a smart stroke or two will dislodge the greatest part of the seeds. They are recommended to restrain the overflowings of the monthly discharges, and all other internal hæmorrhages; the best way of administering them is in powdered electuaries, of which small doses are to be taken at a time, and frequently repeated.

Rue-leaved Whitlow-grass.

THIS is a small wild plant which appears early in the spring on the tops of old walls and low houses; it is of a red colour, and does not grow above three or four inches high. The stalks are round, erect, and somewhat hairy; and they are covered with fat clammy matter, which makes them stick to the fingers in handling. The leaves are small, and of the same colour as the stalks; they are each divided into three parts at the extremity, the middle division being the longest. They are set on the stalks without regularity, and are thick, fat, and clammy in handling, like the stalks. The flowers, which grow at the tops of the branches, consist each of five small leaves, and are of a very bright white; they are succeeded by round full seed-vessels, containing a number of very small seeds; and as soon as these are ripened, the plant withers, and is not discoverable again till the succeeding spring.

The whole of this plant, fresh gathered, is said to be medicinal, and a strong infusion of it a very great sweetener of the blood. It is recommended as an excellent remedy against every species of the scurvy, and the accounts of it's having cured the king's evil

seem to be well attested. For this latter disorder a syrup may be made of it's expressed juice, or a very strong infusion of it may be boiled to a syrup. A conserve may also be made of the leaves, as we have directed for wood-sorrel; indeed, it should be preserved for use in each of these ways, as the dried plant has very little virtue, and it can only be procured fresh during a very small part of the year.

The White Willow.

THERE are many kinds of this very common tree which grow in watery places; but that which is used in medicine is the most common of all, and is distinguished by being the largest, this sort growing to be a tall tree. The bark is of a light ash-colour, and rough upon the trunk, but more grey upon the branches; these shoot into many small tough twigs, which are thick set with oblong narrow leaves, somewhat whitish, but particularly on the under sides; they are placed irregularly on the branches, and are somewhat indented at the edges, but very finely, and pointed at the ends. The flowers appear very early in the spring, growing many together in the form of catkins. The seeds, which are small, stand in the same catkins, inclosed in a fine white down.

The bark of the branches, dried, is said to be a good astringent, and to restrain purgings, and the overflowings of the monthly discharges: the powder of it may either be given in any liquid to the amount of half a dram for a dose, or it may be mixed into an electuary with any syrup.

Winter Green.

THIS plant grows wild in the woods in some parts of England, particularly the western and northern counties, but is not

very common. The stalk, which is about ten or twelve inches high, is round, large, and erect, and totally without leaves, all which spring immediately from the root, and are naked, broad, round, of a dark green colour, and a fleshy substance, resembling in figure those of the pear-tree; they stand each on a separate foot-stalk two or three inches long. The flowers, which stand one above another in loose spikes on the tops of the stalks, are small, of a glossy white, and each composed of five leaves; they are succeeded by sharp-pointed seed-vessels full of very minute seeds. The root consists of a quantity of strong white fibres.

A strong decoction of the leaves of this plant, with a piece of cinnamon in the boiling, and the addition of a fourth part of red wine, is given with success to check the overflowings of the periodical discharges, bloody stools, and other internal hæmorrhages; it is also highly recommended for ulcers in the kidneys, bladder, or urinary passages, and bloody urine; and for inward wounds or bruises, which occasion any discharge of blood.

Wood.

THIS plant is cultivated in many parts of England for the use of the dyers; and though it is commonly found in places near those where it has been sown, growing apparently wild, yet it is not properly a native of this country. It grows tall and upright, and makes a handsome figure; the stalk, which is round, large, strong, erect, and upright, grows four feet high, but is, in general, so wholly covered with leaves, that scarce any part of it is visible. These leaves are of considerable length and breadth, large at the bases, where they spring from the stems, without any foot-stalks, and narrower all the way to the extremities. They are of a green colour with a cast of blue, and they fill the whole plant to the top, in such a manner

manner as to give it a rich appearance; the flowers, which are small and yellow, stand in great numbers about the tops of the stalks, on a multitude of small branches, into which the stalk is there divided: they are succeeded by little seed-vessels, full of very small seeds. The root is long and large.

Though this plant is chiefly cultivated for the use of the dyers, yet it's medicinal virtues demand great respect. The fresh tops of the stalks, before the flowers appear, are thought to contain the highest virtues, and an infusion of these is excellent in removing obstructions of the liver and spleen. It operates by urine, but the use of it must be continued a considerable time; disorders which approach by slow degrees cannot be expected to yield to the first attacks of the most efficacious medicine.

Woodruffe.

THIS plant grows wild in woods and coppices in different parts of England; it seldom rises above ten inches or a foot high. The stalk is square, slender, but little branched; and so feeble, that it is not able to support itself in an erect state: many leaves stand at each joint, and encompass the stalk so as to produce the figure of a star; they are of an oblong shape, broad, and of a dark green colour; in their form and growth they may be compared to the leaves of common clivers, only that these are larger, notwithstanding the plant is so much less; and these are without the roughness which distinguishes the leaves of that plant. The flowers, which consist each of one leaf cut into four parts at the edges, grow at the tops of the stalks in small clusters; they are of inconsiderable size, and white, and each of them is succeeded by two rough seeds, which stand together, and make a kind of globe. The roots are small and fibrous, and creep very near the surface of the earth; a strong decoction of the leaves,

flowers and stalks, is esteemed a good medicine to remove obstructions of the liver, spleen, and gall-bladder; it is also esteemed cordial and stomachic, and particularly useful in the jaundice and dropsy: the green leaves, bruised, were formerly applied to new wounds; but applications of this kind have been long disused.

Treacle Wormseed.

THIS is a distinct plant from that which produces the seed sold in the druggists shops under the name of *wormseed*: that is the production of a plant of eastern growth; but this is an English herb, very different in it's whole appearance from that, and all others of the same tribe. It rises two feet high; the stalks are round, erect, strong, and divided towards the top into several branches. The leaves, which are very numerous, stand on the stalks without regularity; they are long, broad at the bases, but narrow-pointed at the extremities, and not indented about the edges: they are of a dull green colour. The flowers, which grow in small clusters at the summits of the branches, and about the upper parts of them, are small, of a yellow colour, and compose a loose spike; these flowers are succeeded by long slender pods, green at first, but changing to a kind of brown colour as they ripen; each of these contains a great number of round small seeds, of a dusky colour, and of an extreme bitter taste, even so as to exceed the bitterness of the common worm-seed.

This seed also is used medicinally, being bruised and mixed with any jelly of fruits, or with treacle; it is given to children of strong constitutions, to destroy worms; it operates violently as a purge; and, if given in too large quantities, by vomit; and must therefore be used with great caution; though, under proper regulation, it will answer the purpose, and is preferable

able to mercurial medicines, which ought not on any occasion to be administered, but under the direction of skilful persons; in which number we do not include every practitioner of physic. Perhaps a proper investigation of the virtues of the vegetable world might render constant application to medicines of this class less necessary.

Common Wormwood.

THIS plant is frequently found in lanes, and by way-sides, in many parts of England. The root is large and woody, and the stem divided into many stalks, or branches, which are round, channelled, strong, and of a light colour. The leaves are large and winged; they are divided into a number of small parts, an odd one of which terminates each leaf. They are of a pale green above, but whitish or hoary underneath, and stand on the stalks without order; many of the same figure, but larger, spring from the root, and these continue green during the winter. The flowers grow in a kind of loose spikes at the tops of the stalks; they are small, yellowish, naked, and very numerous; each of them is succeeded by several very small seeds. The whole plant is of so very bitter a taste, that it is even proverbial.

A slight infusion of the tops of the plant, fresh gathered, is said to be excellent for all disorders of the stomach; to prevent sickness after meals, create an appetite, and restore a lost one; but if it be made strong, it will not only be so unpalatable as to render it impossible to take it, but will also offend the stomach. The tops and flowers may be dried and powdered, and in this state are recommended as a cure for agues; and act in the destruction of worms in the same manner as worm-feed, and are altogether as efficacious. The juice of those large leaves of *wormwood*, which spring from the root before the stalk appears, is pre-

scribed as a remedy for the dropsy and jaundice, as it removes obstructions, and works powerfully by urine.

Sea Wormwood.

THIS plant, which is commonly found in our salt marshes, and about ditches where the tide flows, very much resembles in appearance the common wormwood; but the divisions of the leaves are much smaller, and the whole plant of an inferior size. The stalks are woody, strong and erect, about eighteen inches high, and much branched. The leaves, as well as the branches, are whitish and hoary. The flowers stand in loose spikes at the tops of the stalks, and are small and naked, differing very little from those of the common wormwood, except in size. The taste of this plant, though bitter, is less disagreeable than that of the common wormwood, and it has a more pleasant and aromatic smell.

The tops may be used fresh gathered, or the leaves and stems dried. It is sometimes called *Roman wormwood* in the markets and shops, and is commonly used for the other, possessing the same general virtues; indeed, the two kinds already mentioned, and that which follows, have them in common; but the first, or common wormwood, is the most unpleasant to the taste, and disagrees most with the stomach; and the three kinds have different degrees of excellence. This is better than the common, but is more disagreeable than the true *Roman wormwood*. It acts as a strengthener to the stomach, assists digestion, and discharges wind. It is commonly used as an ingredient in all bitter infusions and tinctures, but is a good medicine of itself; and the infusion of it, made by pouring boiling water upon it, letting it stand till it is cold, and then straining it off, is an excellent medicine to create an appetite. It may be put into white wine, to which it communicates a pleasant bitter

bitter flavour, and this is an agreeable way of taking it.

Roman Wormwood.

THIS is a more delicate plant of the wormwood kind than either of the former, and is a native of warmer climates, but is found in many gardens in England. It rises to the height of two feet, or two and a half. The stalk is round, smooth, solid, erect, of a dusky brown colour, and inclined to woody. The leaves, which stand irregularly on the stalks, are small and divided into many very fine parts, they are hoary both above and below, and except in this particular, resemble more the leaves of the common southernwood than those of either of the other wormwoods. The flowers are small, of a darker colour than those of common wormwood, but much less; they are very numerous, and stand like those of the other sorts at the extremities of the stalks, in long and large spikes. The root is creeping, and spreads much, it is composed principally of fibres. Though the whole plant has a bitterish taste, yet it is not like that of wormwood, being pleasingly aromatic. The flowers are however less aromatic, and in smell as well as taste more disagreeable than the leaves.

The tops only are used fresh, but the whole plant dried. It is a gentle and admirable stomachic, but it has many other virtues; the juice of the fresh tops is esteemed efficacious to remove obstructions of

the liver and spleen, and other intestinal parts, and it is said to have, in many instances, cured the dropsy and jaundice without the assistance of any other medicine.

Narrow.

THIS plant grows wild in our pastures by way-sides, and in almost every field. It rises two or three feet high. The stalk is round, strong, erect, and channelled. The leaves are long and narrow, they are winged and very beautifully divided, of a dark green colour, and the divisions are extremely fine, slender, and arranged with great order. The flowers, each of which is composed of five little roundish leaves, stand at the tops of the branches in flat round and large clusters; they are generally white, but are sometimes tinged with a blush of red. The seeds, which are contained in a little scaly cup, are white and flattish. The root, which creeps immediately under the surface of the ground, is whitish.

The whole plant may be used when it is fresh-gathered, but the best parts are the tops of the shoots; these may be boiled in water, and the decoction being sweetened with fine sugar, is prescribed to restrain the bleedings of the piles, bloody fluxes, and other internal hæmorrhages: it also checks the overflowings of the monthly discharges. It is reputed to be healing and serviceable in ulcers of the urinary passages, as it operates gently by urine.

General Observations on the Herbal.

HAVING given a description of the several medicinal plants which are either found wild in any part of Great-Britain, or, having been imported from other parts of the world, are to be met with in gardens or plantations here; and having also enumerated their several virtues, and given general directions as to the application of them; it

is now necessary to point out the forms of preparing and preserving them for use, in the great variety of ways in which they may be advantageously administered in different maladies, and to mention some compositions in which vegetables are the only or principal ingredients. It will be extremely useful to those whose residence is chiefly in the

country, to be fully acquainted with all the beneficial purposes to which the various herbs and plants within their reach may be applied; but it is no less convenient, that they should be informed of the means by which their virtues may be preserved through the various seasons of the year; and to these purposes we mean to dedicate this concluding part of our work, trusting that by this means our readers will be not only in possession of a Compleat British Herbal, but of a very valuable body of domestic medicine, which may in most cases be procured without expence, and prescribed without danger.

From the foregoing herbal it will appear, that the leaves only of some plants are to be used; of some the whole plant cut from the root; the flowers, the fruits, or the seeds only of others; and again, that the roots of some plants are the parts which contain their chief or only virtues.

Of different trees, the barks, the woods, the excrescences, and the roots are prescribed, and of some a combination of two or more of these parts.

It will also be observed, that some vegetables are to be used fresh-gathered, and others dried, or preserved; that in some instances the herb is held to be equally efficacious in both ways; in others, there is a preference, or even in one of the states it may be wholly useless. It cannot therefore be improper to investigate these matters fully, by way of giving a general idea, preparatory to the particular directions which are intended to follow.

Of most plants which are natives of this country, the stems and leaves die off in the winter, and only the root remains. In many others, the root perishes also; and the propagation of the species is left to the fallen seeds, which are in such cases always scattered in sufficient plenty, and light on such soils as are suited to their particular growths; and it is generally observable, that the roots of those plants which die wholly, seldom pos-

sess much medicinal virtue; and, on the contrary, the root which is permanent and lasting, producing new shoots every spring, is commonly endowed with valuable qualities. And this may also be considered as a general rule, that where little virtue is to be expected in the roots of annual plants, that deficiency is made up by their seeds; which, in those instances, contain their best qualities.

From some of these plants, the roots of which outlive the winter, large leaves arise in early spring, before the appearance of a stalk; these are, in general, more replete with the particular virtues of the plant, than those which afterwards grow on the stalk, being commonly larger and more juicy: there are also other plants which spring immediately from seeds dropped in autumn, at which season they produce a root, and leaves which stand the winter; though the stalk does not rise till the following spring. These leaves, like those which come from the roots of other plants in early spring, and before the stalks appear, are, in the same manner, preferable to those which grow upon the stalks, deriving the full nourishment from the root; whereas, those which spring afterwards participate only with the stalk and its branches, and a large proportion is drawn off in the preparations made by nature for the continuance of the species, by the production of flowers and seeds. From hence it will appear, that when the leaves of any plant are recommended as the most proper parts for medicinal use, those large ones which grow from the root, are to be taken in preference to those which grow on the stalk; and, if possible, these should be gathered at times when there are no stalks; because they are then most full of juice, and have not been exhausted of their virtues by the growth of the stalk, which certainly carries off a considerable portion of the nourishment from them; and that this is the case may be proved, by remarking that in some plants, although the leaves
which

which spring from the roots were full of vigour before the stalk began to rise; yet as that advances in growth, they wither and die away.

Thus, then, if the juice of the leaves of any plant is directed, it should be expressed from these leaves, and, if possible, in this particular state; and when they are to be used fresh in decoction, or infusion, (proper directions having been given under every head when they are to be used fresh, and when dry) they should be cut as near to the root as convenience will admit, and then shook, or brushed clean; for washing, in most cases, deprives them of a portion of their virtue, and they should be cut into the pot the moment they are gathered.

If the leaves only of any plant are to be dried, the same precautions should be used in chusing and gathering them; and the best way of drying them, is by spreading them upon the floor of a room, which should be kept constantly open in dry weather, and they should be turned two or three times a day; and when thoroughly dried, they should be put into a box, or drawer, lined with paper, where they must be pressed close down, and covered with another sheet of paper.

When the entire plant, except the root is required to be preserved, much care is necessary that it be gathered in a proper season. The whole growth of plants tends in a direct course to the production of their flowers and seeds, and when the latter are ripe, the other parts begin to fall into a decay; from whence it is obvious that the entire plant is in it's highest perfection, and most vigorous state when the buds, or heads, are formed for flowering, but before any single blossom is yet expanded; and this critical time should be carefully attended to.

Such herbs as are to be used fresh, it is adviseable not to cut up from the roots, but to take off the tops at lengths proportioned to the sizes of the plants, and to the uses for

which they are intended; for decoction or infusion they may be cut much lower than for conserve, or the juice, for both which purposes they should only be taken as low as they are perfectly fresh, brittle, and tender; indeed, the tops of plants gathered in this way are in all cases much better for immediate use than the whole plant.

The weather and the season is to be consulted in gathering herbs for preservation; the time most advantageous is after two or three days have passed without rain, and the hour, rather before noon, but when the morning dew is dried up; and these matters must be strictly regarded, for if they are cut in damp weather, or whilst the dew remains on them, they will not dry well; if, after a long drought, their juices will be exhausted; and if, during the meridian power of the sun, when the leaves flag, they do not possess all their virtues.

The herbs being thus carefully gathered, they must be looked over with attention, and all withered, decayed, or worm-eaten leaves, picked out, and any dead parts of the stalks cut away; they should then be tied up in bunches of moderate size, for they do not dry well in large bundles, and hung upon lines stretched across a room with many windows; and, if possible, in different aspects; and these, as well as the doors, are to be kept open in fair weather. The bunches should not hang within a foot of each other, nor should they be taken down till they are perfectly dry, when they should be moved from the lines so tenderly as to avoid shaking them, and losing the buds of the flowers, which are apt to fall off if the plants are roughly handled, and laid even in a drawer or box, in which they should be pressed down, and covered with sheets of white paper; and being thus prepared, they are not only ready for infusions or decoctions, but are much better for distillation than when they are perfectly fresh.

Of some particular plants the flowers are only or chiefly used, and though they are mostly

most of value when they are fresh, yet there are many which retain their virtues dried; these must therefore be prepared for keeping in a particular manner.

Among these the flowers of lavender keep very well, and for that purpose they are to be striped off the stalks with their cups or husks, and spread all together upon the floor of a room covered with paper, and aired from several windows, where they should be frequently turned till they are dry. The flowers of the plant which has been described under the name of *stœcchas*, or French lavender, must be preserved in the whole heads, which should be cut off from the top of the stalk and dried in the same manner, but both sorts are to be deposited in boxes or drawers between papers, and care is even necessary that the paper is not damp.

When the flowers of rosemary are intended to be dried, they are cut from the shrub with a few of the leaves about them, it being a general and well-founded opinion, that the leaves retain more of the good qualities of the plant than the flowers. The custom of drying the flowers of cowslips, borage, and bugloss, is pretty generally left off, it having been long known that they retain but a very small part of their virtues in this state; rose-buds are however still preserved in this way, and are prepared for drying by cutting off the white parts; the full-blown flowers should be treated in the same manner, but we must be understood to speak of the red-rose, the white is seldom dried.

Most other flowers used in medicine are best fresh, but as they are only to be had in that state during a small part of the year, and lose their virtues by being dried, they must be preserved in other forms, such as syrups and conserves; in the former way cloves, poppies, and many other flowers, are kept for use; and in the latter, cowslips, the leaves of wood-forrel, and a great variety of leaves of different plants, which have been directed in the foregoing herbal

to be preserved by this means. Of the manner of making these syrups and conserves, accounts have been given in different parts of this work, and further directions will be subjoined.

Fruits are also used in different states and forms; for instance, a conserve is made of hips, a jelly or preserve of quinces, and syrups of mulberries, black currants, and a vast many other kinds. The fruits which appear in the forms of berries are generally dried, such as juniper berries, bay berries, and the like, and for this purpose they are not to be suffered to ripen, but should be gathered in their ripening, and spread abroad on a large table or floor, where they should be turned till they are perfectly dry; but these directions apply to very few productions of our own growth, most of the dried fruits used in medicine being imported from other countries, and to be procured in the shops.

The seeds of plants which are used in medicine, are included in three different descriptions; those which grow in naked heads or tufts, as those of parsley, fennel, and the like; in pods, such as mustard, cresses, and a thousand other sorts; or in fleshy fruits, as quinces, melons, cucumbers and pomegranates: each of these kinds must be left upon the plant till it is perfectly ripe, when those which grow in tufts or heads are to be shaken out upon the floor, those in pods must be released by a brisk stroke or two of the whole plant on the floor, which if they are sufficiently ripe will dislodge them. When the seeds are lodged in fruits they must be cut open, separated from the wet matter and the membranes in which they are inclosed, and spread upon a table or floor in a dry and airy room, where they must be frequently turned, and as they grow dry rubbed between the hands, that they may not only be dry but clean, any of the juice or membranes which is left about them being apt to generate worms, which will destroy the seed.

The

The roots of plants are also to be used fresh in some instances and dry in others. The two kinds of briony, the arum or cuckow-pint, and some others, which are mentioned in different parts of the Herbal, lose their virtues entirely by drying; in many others it is only retained in a very slight degree; and others, such as the marsh-mallow and plants of that species, are equally efficacious, fresh and dried.

Those which are deprived of their virtues by drying, may, in general, be kept in the earth, and be taken up as they are wanted. Those which cannot be so preserved, may be had for use at all seasons, by expressing the juices in the spring or summer, and boiling them, or strong decoctions, into syrups; or if they consist of tender or pithy matter, it may be beaten into conserves.

Roots for drying should be collected in the very early part of the spring, when they are just about to shoot forth leaves; then, like plants that are just going to flower, they are full of rich and fresh juices, and possess all their virtues in the most eminent degree.

Having acquired a proper knowledge of the months, and even parts of them, in which the root to be preserved first puts forth it's leaf; those who are employed in this business must search the ground for the first appearance of it, sufficient to determine the plant with certainty. The roots must be then taken up and wiped clean, but not washed, nor should they be wiped so roughly as to rub off any of the external skin, all that is necessary being to divest them of the adhering earth or dirt: this done, they must be prepared for drying according to their several natures; those which are full of a mucilaginous juice, such as marsh-mallow, the squill, and others of the same contexture, are to be cut across into thin slices, and will dry to greatest advantage laid upon a hair-cloth stretched over

a frame, where they must be constantly turned and examined, that they are thoroughly dry before they are put by for keeping; if the least juice or moisture is left, they will become mouldy; but when they are perfectly dried, they are not liable to this inconvenience. It should be observed, that the moment a root becomes mouldy it loses all it's virtues.

Those roots whose juices evaporate more easily, and in which the virtue is lodged in some particular part of them, must, if the substance of the whole root is uniform, of course be prepared accordingly, till the virtue is equally dispersed among all parts of them. And this kind of root, after cutting off the head, and the small or thin part of it where it runs very taper, should be split lengthways into two equal parts, or if it is of considerable thickness, it may be quartered; this done, the divided parts are to be strung upon a line, by drawing a needle threaded with a small packthread through the largest part, and this line must be stretched across a room, where they must be left to dry in the manner directed for herbs, the doors and windows being always kept open by day in good weather. But those which are composed of different parts, such as a sort of thick rind, a fleshy substance within that rind, and a hard woody or stony part in the middle, have all their virtues in the fleshy substance, (the exterior rind or bark, and the hard inner substance, being destitute of any) and in this case the root is to be split in length, as directed before, the hard woody part taken out and thrown away, and the remaining part strung to dry in the manner last described. Roots which consist principally of fibres are generally connected to a head; and however small it may be, it will be adviseable to split it in two parts, and string them up separately for drying.

But few barks of trees are to be found in the catalogue of medicines of British growth, and of them most are directed to be used fresh;

yet some there are which will preserve and retain their virtues dried; and to prepare these for keeping, little more is required than to divide them into pieces of moderate size, and string them up in the manner which has been directed with respect to roots; and these, when dry, are to be put up in the same way, and will keep for a considerable length of time, though as they grow old their virtues decrease by degrees; and for this reason, which extends also, though not exactly in the same degree, to roots, flowers, herbs, and leaves, they should be renewed every year, which will be no very heavy burden, as the principal expence consists in the trouble of gathering and preserving them. And as soon as the fresh assortment is collected, the old one should be thrown away, to prevent mistakes and confusion.

The room appropriated for laying up herbs, plants, flowers, and roots, to keep, should be perfectly dry, and neither damp nor hot; and it should, if possible, have two windows on opposite sides, so as to admit a current of fresh air in dry weather; and here they should now be frequently looked at, to see that they do not grow damp, mouldy, or musty, or lose their weight and virtue by too much heat. Vermin should also be carefully looked after, which are apt to do much mischief among such collections.

There are but few medicinal woods of the growth of Great Britain; those which are used should be kept in the stem, or branch, and cut into shavings as they are wanted, for they soon lose their virtues after they are separated into small parts.

The several excrescences used, are the galls of the oak; and the burr upon the wild briar, and these require but little drying; a few days exposure to the air upon a table, or in a shady window, will generally bring them to a fit state for laying by, when they may be put up without danger, and preserved a very considerable length of time. And the several kinds of fungus

should be gathered when they are full grown; and, according to their sizes, either whole or cut into pieces, strung upon a line, where they may dry by slow degrees; but particular care must be taken that they are very well dried before they are put by; they will otherwise grow mouldy in damp weather, and then they cease to be of any manner of use.

We have already, in different parts of the Herbal, given directions for the administration of the several vegetable productions; but it will not be improper to offer general instructions for the most simple, easy, ready, and in many cases most efficacious method of preparing them for use; which are confined to juices, infusions, and decoctions; but these are to be procured and made in different ways, according to the nature of the particular plant.

Juices are to be expressed in some cases from the whole plants, in some from the leaves, and in others from the roots; where the stalks are dry and sapless, like the nettle, nothing can be procured from them, and they should therefore be left out; in others, such as water-creffes, brook-lime, and the like, the stems are as full of juice as the leaves, and may be used with them; and whatever part or parts will yield the juice, must be well beaten in a marble mortar with a wooden pestle; for metal may, in some cases, communicate a quality to the herb which does not belong to it, and make it injurious instead of salutary.

To procure the juices of roots; they must be fresh out of the ground and thoroughly beaten, and the stringy, woody, or hard parts be taken out, as they serve in general to interrupt the reduction of the softer parts to such a state as may facilitate the extraction of the juices.

Such of these juices as are to be taken immediately, are sometimes extremely unpalatable, and others are apt to lie cold upon the stomach, excite sickness, or otherwise disagree with it; but these inconveniences may frequently

frequently be corrected, and the virtues rather increased than lessened.

If the fresh-drawn juice in it's thick state is too coarse for the patient's stomach, it may be permitted to stand till it settles and grows clear, or a small quantity of it may be added in beating; in some cases, and particularly with the juices of antiscorbutics, the acid juices of lemons or Seville oranges may be added, with great advantage, not only to the flavour, but the effect.

In beating roots for the expression of their juices, a little white wine may be added, both to facilitate the work, and procure the medicine a more certain and agreeable operation; the juice of some roots, and in particular of the flower-de-luce, will not in general stay upon the stomach, unless a little white wine hath been added in the bruising, when it seldom fails to settle, nor does it lose any of it's effects on account of the mixture. The like addition to some of the colder herbs will be serviceable, and a little sugar, and in some cases a small quantity of powdered ginger, may be added to the juice in pressing, to secure it effectually from disagreeing with the stomach; nor will it be less efficacious than if it had been bruised and pressed alone.

But there are seasons of the year when the fresh juices are not to be obtained, and then an infusion of those plants, which by being dried and preserved according to the preceeding directions, retain a great part of their virtues, is to be substituted; and for this purpose the herb is to be cut to pieces, and boiling water poured upon it, which in some cases extracts so much of it's qualities as to supply the place of fresh juice: indeed, the virtues are nearly the same in some plants, and even greater in others from the infusion; though some lose so much in drying that the infusion is only to be used because the fresh juice cannot be procured; and some again are efficacious in the dry state, and in the form of infusion, when the

fresh juice would have been of little or no service.

Herbs whose qualities are light, and their virtues easily extracted, are best taken in infusions, the boiling water poured upon them extracting all their good qualities, none of which are lost in the operation.

But other herbs, of a more thick and heavy substance, require to be boiled; and from these, in this way, are made decoctions: for as those of a lighter kind would lose their virtues by boiling, which would go off and evaporate in the steam; so the more substantial plants would not yield their best qualities without the process of boiling. And this is fully exemplified, as to the lighter herbs, by distillation; the water obtained in this way being only the vapour of the boiled herb condensed and caught by proper vessels.

Thus, then, it appears, that some plants are by nature fitted for decoctions, and some for infusions; nay, some plants which, if distilled, yield no virtue to the water, are fit for decoctions, in which way all their virtues will be extracted and retained: some herbs have so little juice, that it would be impossible to get it out by expression; and the virtues of others lie in the husks and buds, from whence no juice can be extracted; these can only be administered in infusion, which extracts qualities that could by no other means be got at.

But there is a difference in the preparation of infusions, which are either prepared in quantities to be drank cold, or are made and taken in the manner of tea, which is certainly the most adviseable method, though the sick are generally deterred from using them in this way, from the disagreeableness of the taste; the flavour of all herbs being much stronger hot than cold. Those infusions which are to be taken warm, are to be prepared in the manner of tea, and not suffered to stand longer; they may be drank with a moderate quantity of sugar.

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In order to make infusions for frequent draughts, the herb, whether fresh or dried, is to be cut to pieces, and a stone-jar, which covers close, being got ready, and scalded out with hot water, the herb is to be put into it; and boiling water being then poured upon it till it is covered, the jar should be closed, and it should stand from four to twelve hours, according to the nature of the plant, after which it should be poured off clear.

The quantity of the herb to be used must depend also on the nature of it, as well as the state of the disorder for which it is prescribed; as a general rule, one ounce of dried herb is equal to two, or two and a half of fresh, though this is by no means infallible. And even in the applying these quantities the palate must be consulted, as it must by no means be made disagreeable, though it will be useless if it is not strong enough to contain the virtues of the herb; and the due proportion for this purpose can only be ascertained by repeated trials, as the same herb sometimes contains it's good qualities in greater or lesser degrees, according to the particular circumstances of it's growth or preservation.

But infusions may, in many cases, be made agreeable to the taste, by additions which do not lessen their efficacy; these may be, in some cases, sugar and a little white wine, to which, in other cases, a mixture of the acid juices may be very proper, and both the wine and acid may, in putrid disorders and slow fevers, be less sparingly administered than in diseases of an inflammatory nature.

Of the herbs which yield their virtues most conveniently by infusion, may be reckoned most of those which are pectoral and serviceable in coughs, and other complaints of the lungs; such as colts-foot, ground-ivy, and the like. Those which, being light and aromatic, are recommended in nervous disorders, are baulm, mother of thyme, and several others, which

may be noticed in the Herbal. And most of the bitter herbs are best taken in infusion; and boiling water poured upon the different kinds of wormwood, gentian root, or orange peel, makes an admirable bitter, being only suffered to stand till the liquor is cold, and then poured off for use; but decoctions of either of these ingredients would prove extremely disagreeable to the taste, and probably inefficacious. If it should be found necessary to give any purgative quality to these bitter infusions, a little fresh polypody root will answer that purpose, without making the liquor unpalatable.

Nor is the infusion of this root alone inefficacious as a safe and gentle purge, any more than the infusions of purging flax, and many other vegetables; but to that of the plant last-mentioned, or of fenna, a little orange or lemon juice may be added, which takes off every thing disagreeable in the taste, and renders it a pleasing beverage, instead of a nauseous medicine.

To answer the end of infusions upon those plants whose firm textures refuse to yield their good qualities to the mere pouring on of boiling water, decoctions have been invented; and in preparing these the ingredients are to be boiled in the water; and though all the parts of different plants require this operation in order to extract their virtues, yet, in general, leaves, flowers, and entire plants, fresh and dried, are used in infusions; and the roots of plants, and the barks of trees and shrubs, in decoctions.

To prepare decoctions in the most safe and prudential way, an earthen pipkin, with a close cover, should be procured; for as all vegetables contain certain portions of salt and acid, the decoction may take a tincture from the metal; and it is as improper to boil herbs in a copper pan as to beat them in a metal mortar, a practice against which we have already given a caution.

Decoctions may either be prepared from fresh roots, or from those which have been dried,

dried, and the barks of trees and shrubs may, in like manner, be used in either state. When they are used fresh, the roots should be cut into thin slices, and the barks and woods into thin shavings; but when they are to be made from leaves or entire plants, they need only be grossly cut. If the roots or barks are to be used dry, they should be bruised or pounded to pieces; and dry herbs and flowers are generally so crisp and brittle, that they are sufficiently divided in thrusting them into the vessel. If these last-mentioned ingredients are to be used in the same decoction with the former, they should be added toward the end of the boiling.

When you intend to make a decoction which is not immediately wanted for use, let the ingredients stand in the water some hours before it is set on the fire; it should then be heated very gradually, and the boiling should be as gentle as possible; the length of time necessary to extract the virtues must be proportioned to the nature of the ingredients; a quarter of an hour's boiling is sufficient in general, but sometimes it is necessary to increase that time; and when this is completed, the liquor is to be strained off while it continues hot, and the herbs or other ingredients pressed hard; and this liquor is to be set by to settle; and when it is thoroughly cold, it should be poured off clear from the sediment, which always subsides as it cools, and it may be sweetened with sugar for use; or white-wine may be added, as to the infusions, according to circumstances.

But few simple waters are at present used in medicine, though they were formerly very numerous; and as few families are without an alembic or still, those which are necessary and useful may be made with no other expence than the fire and attendance.

Mint-water, peppermint-water, and pennyroyal water, are best made of the dried herbs; three pounds weight of either of these herbs, in this state, is to be put into the

still, with four gallons of water, and the quantity of two gallons is to be distilled off.

Milk-water may be made as follows.

Take three quarters of a pound of spearmint, or common garden-mint; half a pound of rue; four ounces of Roman wormwood; and four ounces of the leaves of angelica; put these into the still with ten quarts of water, and draw off fix. This is useful in fevers, and to prepare juleps.

To make a water which answers the purpose of a compound spirituous water.

Put into your still at night one pound of Jamaica pepper, with three gallons of fair water; draw off two gallons from it the next morning.

Cordial spirituous waters are at present very little in use: those, however, who chuse to keep some of these preparations by them, may make them as follows.

To make cinnamon water.

Put into the still a pound of cinnamon bruised, a gallon of spirits, and a gallon of water; let it stand twelve hours, then distill off one gallon.

To make spirituous milk-water.

Take two pounds of fresh garden-mint, one pound of angelica, and half a pound of Roman wormwood, both likewise fresh; to these add two gallons of spirits, and the like quantity of water; draw off two gallons, and add to it, when distilled, a quart of strong vinegar. This is used as a sweat in colds occasioned by damp, and in rheumatic complaints.

To make strong penny-royal water.

Take three pounds of dry penny-royal, two gallons of spirit, and three gallons of water; from this quantity two gallons may be drawn. This is administered in hysteric complaints, and to promote the periodical discharges.

To make anniseed water.

Take a pound and half of anniseeds, a pound and half of angelica seeds, three gallons of spirits, and six quarts of water; distill three gallons. This is a good medicine for the windy colic.

To make lavender water.

Take two pounds of fresh lavender flowers, two gallons of molasses spirits, and one gallon of water, and draw off five quarts.

To make Hungary water.

Take three pounds of rosemary flowers, with the tops; two gallons of spirits, and two gallons of water. From these ingredients distill five quarts.

To make spirit of lavender.

Take three quarts of lavender water, and one of Hungary water; add one ounce of cinnamon, one ounce of nutmegs, and six drams of red Saunders wood. Shake these ingredients, and let them stand together till the spirit has taken a good colour; then pour or strain it off fine.

Many tinctures are useful, and it would not be amiss to keep them, of all the roots and barks which are prescribed in the course of this work to be taken in a dry state; for tinctures will contain more or less of their virtues, and may be found useful where the powder or decoction cannot be administered; and as the several medicinal roots and barks have been already enumerated, it is not necessary to repeat them, as a tincture may be made from either or any of them, by one general rule.

Take one ounce of the root or bark, and, according to it's nature, cut or bruise it to pieces; let it infuse twelve or fourteen days in a place moderately warm, shaking it frequently till the last twenty-four hours, when it must be left to settle, and then poured or strained off fine, and bottled for use.

But there are some other tinctures which are composed partly of foreign ingredients, and some even wholly; which, as they are easily prepared, and generally useful, it may not be improper to mention in this place.

Tincture of castor.

Take one ounce of castor, and one pint of spirit; infuse, and strain off as above directed. This is esteemed an anti-hysteric medicine.

Tincture of foot.

Take one ounce of wood-foot, and half an ounce of assafoetida; infuse as above in a pint of spirit, and strain or pour it off fine. This is said to be an excellent remedy in epileptic fits.

Tincture of steel.

Infuse two ounces of flowers of iron in a pint of spirit; this may be very easily poured off fine. This medicine is prescribed to restrain the overflowing of female periodical evacuations.

Conserves may be made of rue, mint, scurvy-grass, wood-sorrel, Roman worm-wood, and a variety of other plants; of roses, rosemary, and many other flowers; and of hips, sloes, oranges, and other fruits. From those plants which have stiff or woody stalks the leaves are to be picked off and beat up with three times the weight of sugar. The tops of the young shoots of such plants as are juicy and tender may be cut off as far as they are quite brittle, and beaten up with a like quantity of sugar.

Conserves of the flowers of rosemary, mallows, archangel, and lavender, may be made in the same manner as conserves of leaves or young shoots; and to make conserve of red-roses, the buds must be picked from the husks, and the white bottoms cut off; and then a conserve may be made from them in the same way, as it may also of cowslip

cowslip flowers, and of those of many other plants mentioned in the foregoing Herbal.

To make the outer rinds of Seville oranges and lemons into a conserve, they must be first beaten into a pulp; and then the sugar is to be added, and they are to be beaten afresh.

To make conserve of hips, they are not to be gathered till they are fully ripe, after which they are to be laid by in a dampish place till they are perfectly soft; they are then to be spread upon the back of a large hair sieve; and a dish being placed under it, they must be broke with the hand, or a pestle of wood, and rubbed over the sieve till all the pulp is forced through the hair-cloth, and the seeds and skins only remain. This pulp being weighed, twice the weight of loaf-sugar powdered is to be added, and the whole beat together in a mortar.

To make conserve of sloes, they must be gathered when they are ripe, but before they are shrivelled; and they are to be set over a fire in a kettle of water, till they swell and are softened; but care must be taken that the skin do not burst: they are then to be laid upon a sieve, and the same process pursued as for making the conserve of hips, only that three times the weight of sugar is necessary to be beat with this pulp to make a conserve.

A syrup may be formed from a vast variety of vegetables and fruits; and the liquor, of which it is to be made, may be the juice of herbs or fruits, or a decoction or infusion of the former; but which ever it is, it should stand till it is perfectly clear; in which state it should be poured off, and three pounds and a half of loaf-sugar, first powdered, must be added, and the sugar and liquor together put into an earthen pan, which must be placed in a larger vessel, with such a quantity of water as may not endanger it's getting into the syrup and set over the fire, where it must remain till the sugar is perfectly dissolved. During the time it is dissolving, the scum must be care-

fully taken off as long as any rises; and as soon as it is cold, it may be bottled for use, and will keep the year through, without becoming candied or fermenting.

To make syrup of cloves, take one pound and half of clove July-flowers, picked from the husks, and the white heels cut off; pour upon them one quart and half a pint of boiling water: let them stand twelve hours; then pour off the clear liquor, and, following the above directions, make it into a syrup. In the same manner syrup of violets and red poppies may be made; but a smaller proportion of the violet flowers will answer the purpose, and some addition must be made to the quantity of the poppies. In the like way syrups may be made of damask roses, peach blossoms, cowslip flowers, and all the other flowers which have been recommended in the Herbal to be preserved for use in this way.

To make syrup of buckthorn, the juice must be boiled down to half the original quantity, with a small addition of cinnamon, ginger, and nutmeg; and when the quantity is thus reduced, it must be boiled again with the sugar.

For syrups of lemon and orange juice, mulberries, and other juicy fruits, a pound and half of sugar is required to every pint of the clear juice, which is to be melted as before directed.

Syrups may be made of garlick, leeks, orange-peel, lemon-peel, and of various herbs, by preparing strong infusions of those ingredients in the manner already ordered, with the quantity of sugar first-mentioned, which must be added to them after they have stood till they are perfectly fine, and the liquor is poured off from them in that state.

Syrup of marsh-mallows, poppy-heads, and others of the like kind, may be made in the same manner, with the strongest decoctions that can possibly be procured from those ingredients, and the proportion of sugar allotted to infusions.

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To make syrup of saffron, a strong tincture is first to be procured by infusing two ounces of saffron in a quart of Mountain; and this being strained off, may be made into a syrup with the same quantity of sugar.

A particular kind of syrups, under the name of honeys, in the composition of which honey was used instead of sugar, and some to which vinegar was added, with which addition they passed by the name of oxymels, were formerly in much use; but they are not now in great reputation, at least not above two or three sorts of each.

Among these, honey of roses is the most common, which may be made in the following manner: cut the white heels from any quantity of red rose-buds, and lay them to dry in a shady place, where there is a free current of air; when they are properly dried, put a pound of them into a stonejar, and pour on them three quarts of boiling-water, stir them well with the water after they have stood twelve hours, press off the liquor and let it settle, then pour it off fine, and add to it ten pounds of honey, boil it till it is of the consistence of a thick syrup, when it is fit to be laid by for use. In the same manner may be made the honey of any flower, or (with the expressed juice) of any plant. Oxymels are also made in the following manner; and some few of them are so useful, that it may be convenient to keep them in a family.

To make oxymel of garlic, put a pint of vinegar into an earthen pipkin, with half an ounce of caraway seeds, and the like quantity of sweet fennel seeds; after it has boiled some time, add three ounces of fresh garlic root, sliced; after this addition, it must boil a minute or two longer, when it must be covered up, and when cold the liquor is to be pressed out, and a pound and a quarter of honey being put to it, it must be boiled to a consistence.

Oxymel of squills is made as follows: Infuse six ounces of dried squills for three

days in a quart of vinegar, then press out the vinegar, let it stand to settle, and pour it off fine; afterwards add to the liquor three pounds of honey, and boil it to a consistence.

To these may be added the simple oxymel, which is made of a quart of vinegar and four pounds of honey, boiled together to the consistence of a common syrup.

Vegetable oils are made by infusion of herbs and flowers in common oil. These are also very easily prepared: one or two prescriptions will be sufficient to direct the making of all the others.

To make oil of St. John's wort, half a pound of the flowers of common St. John's wort are to be picked clean, and two quarts of olive oil being poured on them, the whole must be stirred together, and suffered to stand till the oil takes a reddish colour, when it is to be pressed off. To make oil of elder, a pound of elder flowers are to be put into a quart of olive oil; which is to be boiled till the flowers are crisp, when the oil is to be strained off.

The common green oil is made by bruising in a marble mortar six ounces of green camomile, with the like quantity of bay-leaves, sea wormwood, rue, and sweet marjoram; these herbs are to be boiled in a quart of olive oil till they are crisp, when the oil is to be poured off, and when cold bottled for use.

The virtues of these oils are mentioned under the several herbs which are the principal ingredients of them; and after one or other of these methods, may be made oil of any plant, or of any number of plants.

Having thus pointed out the several forms in which the virtues of the vegetable world may be preserved for use, and recommended the most advantageous methods of administering them, it remains to ascertain, as nearly as possible, the quantities of each composition, which may be given with safety, and the hope of success. But it must be observed, that these directions can never be offered with precision, but must

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be varied according to the violence of the disease, and the age, habit, and constitution of the patient; and that the following rules must only be considered as general ones, to be followed when more particular prescriptions are not found under the head of the disease which the medicine is intended to relieve.

The strength of infusions and decoctions is to be regulated by the taste; for as they are intended to be swallowed in considerable quantities, if they are made so strong as to be very unpalatable, that end will be defeated: yet they may be rendered less disagreeable by a moderate quantity of sugar, though they are apt to pall the stomach if they are too highly sweetened; so that about an ounce to a quart is generally sufficient. We have already mentioned the addition of wine and acids in particular cases.

The dose of either decoction or infusion may be, in general, about half a pint, unless they are designed to purge or vomit; in which cases the quantity must be proportioned to the exigency of the occasion and the situation of the patient.

Of simple waters, half the quantity, or about a quarter of a pint, will be sufficient; and of the cordial or spirituous waters, less than half that quantity: the latter may, in particular cases, be given alone; but they are principally intended to be mixed with other ingredients of less strength.

Tinctures are to be administered in drops, and from ten to an hundred may be a dose, according to their natures and strength; which, as well as the particular circumstances of the patient, are to be consulted. As a general dose, five and twenty drops may be considered as proper for a man of middle age and tolerable constitution; these are also sometimes given alone, but are much more serviceable in mixtures than in this way.

A julep may be composed of six ounces of one of the simple waters, two ounces of one of the spirituous waters, two drams of a

syrup, and fifty drops of a tincture: these are the proper proportions for mixture; but this quantity may make two or more doses, according to the case.

A draught is only a julep of less quantity, with more powerful ingredients added to them; and the proper dose will consist of an ounce and a half of a simple water, three drams of a strong water, one dram of a syrup, and forty drops of a tincture; but to these may be added a medicine of some power to increase the virtue. The waters, tinctures, or syrups, to be used, will be determined by the case itself, and by referring to the Herbal.

To make a bolus of any vegetable root or bark reduced to powder, a scruple, or half a dram, is generally sufficient, which is to be made into a sort of paste with syrup. Medicines in this form were formerly covered with leaf-gold; but if any covering is necessary, wafer-paper is the most innocent.

Electuaries may be made of powders, conserves, and syrups: they differ from boluses, as well in that the size is inferior, as that the dose is smaller, although the piece taken be as large; which is owing to the admixture of conserve, which possesses, in general, little virtue in comparison with the other ingredients. This form is most convenient for medicines that are to be taken for a length of time; and in the administration of which, precision, as to quantity, is not so very material.

An electuary against an habitual looseness, when it exceeds all reasonable bounds, and threatens to become dangerous, may be made by mixing an ounce of conserve of red-roses, and six drams of syrup of cloves; and to these may be added two drams of powdered bistort root, one dram of powdered tormentil, and half a dram of toasted rhubarb; and of this electuary a quantity equal to the size of a nutmeg may be taken once in two days, which will gently check the number of stools, without putting an immediate stop to the usual, and, perhaps,

necessary looseness. This is also a pleasant medicine; and it's efficacy may be increased by giving a draught of tincture of roses after every dose of this electuary.

One observation still remains to be made. Opiates and anodynes to compose the sick to rest, and to abate the violence of pain, are frequently necessary; but as they are the most powerful, and in some measure the most dangerous medicines, which those who do not possess medical skill can venture to administer; so the manner of using them should be attended to with the utmost attention and circumspection.

Besides opium, and liquid laudanum, which is a preparation of that drug, there are several different preparations mentioned in the foregoing Herbal, which may answer the same purpose: among these, a syrup made of the juice of the wild lettuce is an excellent medicine. The syrup of diacodium, which is made of the strong decoction of poppy-heads, is somewhat more efficacious than this, if a quieting dose still more powerful than the other is required.

We have now furnished our readers with an Herbal, containing, we apprehend, all, or far the greater part of the herbs of the na-

tural growth of Great-Britain; or which, having been imported from other countries, are to be found in gardens, plantations, or hot-houses, which are known to contain any particular medicinal virtues; and we have added such descriptions to each plant, as will enable them to distinguish the different kinds with precision. To this we have annexed the methods of preserving the leaves, roots, and flowers of each, and the several forms in which they may be administered; together with the various preparations of them in infusions, decoctions, conserves, jellies, syrups, and powders; and the composition of them in juleps, draughts, boluses, and electuaries. We have also subjoined prescriptions for the quantities and doses, with as great a degree of accuracy as the variation of different cases will admit; and we trust we have now compleatly performed our engagement, to make our readers perfectly acquainted with the value and efficacy of British simples; and that they will find themselves possessed of such information, as will enable them to apply the produce of their own country with certainty, safety, and success.

A D D E N D A.

Authenticated extraordinary Cases in Physic and Surgery.

C A S E I.

Of a Disease occasioned by swallowing Stones.

ONE Thomas Gobfill, a lean man, aged about twenty-six or twenty-seven years, being for three years extremely tortured with wind, was advised to swallow round white pebbles, which he did as often as the fit returned; and the stones passing easily through him, he thereby found great relief. But, some months after, being seized with a violent fit, he swallowed, as usual, about nine stones; which not passing, he repeated the dose till he had taken above two hundred. These stones had been lodged in his body above two years and a half, when he first applied to a physician; and then he complained that his appetite was gone, that he could digest nothing, but threw up every thing he eat. Upon examining his belly, the physician found the stones lay almost as low as the *os pubis*, or bone immediately over the private parts; and thrusting his fingers just above that bone, so that the lower part of the belly might lie on his hand, he could, with the motion of it, shake and make them rattle as if they had been in a bag. Upon this he caused a ladder to be set against a wall, and hung the patient up by the hams, with his head downwards. When he was in this posture, he said the stones were got up to his stomach; but being set down upon his feet, in a very short time the stones were plainly heard to drop down one after another.

When his body was bound, he vomited all he eat and drank; to prevent which, he commonly kept it open with whey. As he lay a-bed, the stones would sometimes get

up, as the patient expressed it, almost to his heart, and give him great uneasiness; and at such times he was obliged to get up upon his knees, or stand upright, and then he could hear them drop; and he always reckoned above one hundred. He was so disabled by these stones, that he could not work but with pain; and then he felt the same at night, and next day a great soreness in the bottom of his belly, and voided large quantities of blood by stool. He had been under the hands of several quacks; some had vomited him with *stibium*, and purged him; others purged and clystered him; but all the medicines they made use of could never bring one stone from him.

After some time, he told the physician that the pebble-stones grew more troublesome to him; that of late he had vomited up two of them, which were weighed, and one of them found to be two drams; and the other one dram, two scruples and a half. The patient complained that his strength was of late much decreased; that he voided great quantities of blood by stool, which kept him very weak. His appetite was also very much impaired, and his stomach would scarce retain any thing. His hands were paralytic, always extremely cold, and his fingers contracted; so that he was not able to open them without help, nor could he keep them open unless it was by force. His legs were very likely in a short time to be as useless to him as his hands; for he said they began to fail him, and in the same manner to grow cold, and have little feeling in them. But the most remarkable of all his complaints was, a new progress the stones had either found or made.

Formerly

Formerly at night, in bed, they used to get up, as hath been mentioned, to his heart; and upon turning to his knees, or standing upright upon his legs, they would drop one by one, so distinctly, that they might be counted; and in this state they always arose straight upon the right side of his breast: but now they rose obliquely, and got under his right arm, inclining towards the shoulder-blade; and when they were in this place, by giving him a blow with the fist on his right shoulder, they would all fall down in a lump together, and might very plainly be heard to clash on the other stones, which lay, as they did formerly, just above the *os pubis*. He at last died suddenly.

CASE II.

Of a Plum-Stone remaining Thirty Years in the Guts.

SARAH SWAYN, of a thin habit and middle stature, when but six years old, was first afflicted with a violent pain, together with a large, hard swelling, on the left side of her belly, which lasted twelve hours, and then went off without the use of any remedy or sensible evacuation; and, at the end of three months, it returned, continued, and went off as before. It observed that period for several years, and then it changed its intermission from three months to three weeks, and continued so till she was thirty-five years old; in which time she married, and bore one child, the pain of which she averred to be much less than what these paroxysms gave her. During her pregnancy, neither her pains nor her intermissions had any alteration; and, in her whole life, she found no diet disturbed her, but milk and salt meats. About nine months before she was cured, the pain increased, and the tumour became as big as a man's two fists. She had endeavoured to get ease by several remedies, but all in vain,

till her agony and watchings had weakened her so, that she could not rise out of her bed. In this condition she was advised by a woman to take a dose of powdered jalap; it operated violently, and suddenly drove the pain from her side down to the fundament, where it resembled a tenesmus, or a constant and violent inclination to stool, without being able to force any thing off; and, after she had been thus afflicted for four days, a suppression of urine came on; and, two days after that, a surgeon was called: he perceived, by the account given him, that something obstructed the passage of her *fæces*, and he soon found it so by a probe. He then anointed the passage with an unctuous ointment; and, taking hold of the substance with a pair of large forceps, he extracted it. Abundance of wind and *fæces* gushed out, and continued to flow till her guts were emptied of all the matter which had been so long retained therein; after which he ordered her an anodyne clyster and a composing draught; and for several years after she continued well. The substance extracted was round, somewhat oblong, having some such impressions on it as men's fingers make on wax or plaister; it weighed ten drachms at the time of extraction, but afterwards scarcely an ounce. It was five inches in circumference. Although it felt rocky, and otherwise appeared like a stone, yet it swam on water. Upon cutting it in two with a knife, to view the inside, it appeared externally black and smooth, as if it had been varnished; nor was this coat thicker than one of varnish. Next to this was a crusty substance like brick, as thick as a half crown: within that appeared a substance resembling paste-board; and within that lay a prune, or withered plum, with the stone and kernel cut asunder with the knife. Thus all these surprising symptoms, which so long afflicted this patient, were occasioned by swallowing this plum-stone so many years before.

CASE

CASE III.

Of a Sleeper.

ELIZABETH ORVIN, born at St. Gilain, in Austrian Flanders, of a healthy, robust constitution, had served the curate of that place for many years very faithfully, till the beginning of 1738; when she became very fullen, uneasy, and so rude and churlish, that the neighbours said she was losing her senses. Towards the month of August, she fell into an extraordinary sleep, which lasted four days; during which time she took no manner of nourishment, neither was it possible to rouse her. She awakened at last of herself, in a very ill humour, which did not, however, hinder her from following her business as before, for six or seven days, when she fell into a profound sleep again, which lasted only eighteen hours, after which she awakened, and from that time continued to sleep seventeen or eighteen hours a-day; that is to say, from about three o'clock in the morning till eight or nine at night, except four months in the year 1745, when she had a natural sleep; and twenty-one days in the year 1748, when a tertian fever kept her so far awake, that she did not sleep above two hours at once. It was commonly believed that the day-light had some influence upon her, because she could not be awakened in the day-time. A physician from Brussels, who went to see her, with Mr. Presto, surgeon-major of a regiment, were admitted to her room about five o'clock in the evening. He felt her pulse, and found it natural: having raised her arm, he observed it to be very stiff and heavy, and had a good deal of difficulty to bend it; when it was let go, it fell like a piece of heavy wood. Her head was then raised, and with it her back and shoulders; for her neck was as stiff as a board, and her legs were in the same state. He put his mouth to her ear, and

called as loud as he could, but was unable to wake her; that there might be no cheat in the matter, he thrust a pin through her skin and flesh to the bone, kept the flame of burning paper to her cheek till the scarf-skin was burnt, put volatile spirits and salts into her nose, and thrust a little linen, dipped in rectified spirit of wine, into her nostril, and kindled it for a moment; all this was done without his being able to observe the least change in her countenance, or signs of feeling. The surface of her body was warm, and in a gentle perspiration. At half an hour past six o'clock, her neck, arms, and legs, were more supple than at his arrival, which he attributed to her drawing nearer the time of her awakening. About eight she turned in her bed, got up abruptly, and came to the fire. The physician then asked her several questions, to which she gave four answers; appeared gloomy and sad, and repeated often, that she would rather be out of the world than in such a state. He could get no satisfactory account from her about her sickness; all that he could learn from her was, that she felt a heaviness in her head, which she knew to be the fore-runner of her disorder, and which determined her to go to bed, where she lay, without once turning, from the time she lay down till her sleep was over, and had, during that time, no sort of evacuation, except by perspiration. She told the physician she was formerly regular as to her discharges, but could not well remember when or how they left her. He saw her eat with an appetite, and begin to spin, and then quitted her; but coming back the next morning, found her in the same state of sleep and stiffness as at his first arrival. He then made new efforts to rouse her, but in vain; the success was still the same. The woman that she lived with said they used to give her some nourishment through a funnel when the sleep was remarkably long; upon which information, her mouth was opened, and four spoonfull

of milk poured into it, which she swallowed; and he observed the action of the throat, though a spontaneous or voluntary motion, to be regular, and the deglutition natural. The surgeon of the place acquainted the physician, that he had given her several large doses of tartar emetic, one of which consisted of eighteen grains, without being able to awake her. He also mentioned several methods that were used some years ago to rouse her, such as her being whipped till the blood ran down her shoulders; her having her back rubbed with honey; and being exposed in a hot day before a hive of bees, where she was stung to such a degree, that her back and shoulders were full of little lumps or tumours. At other times they thrust pins under her nails, together with some other experiments equally cruel and indecent. The medical relater of this case was also assured, that the roaring of the cannon, during the siege of the fortrefs in the place where she resided, in 1746, never awakened her, nor interrupted her sleep. This poor woman, at the time of giving this account, March 1753, was fifty-five years of age, of a pale colour, and not very lean; she never at this time saw day-light, but slept out the longest day in summer; and in winter began to sleep several hours before day, and did not awake till two or three hours after sun-set. During her sleep, she had a natural warmth all over her body, with an extraordinary tension or stiffness of her limbs, as well as her neck, joined with a total abolition of all manner of sensibility; which would seem incredible, if the affair had not been examined into with the greatest exactness.

CASE IV.

Of a fractured Skull.

SOME flakes falling from the roof of a house, four stories high, upon the head of a girl about 13 years of age, broke and

shattered her skull, at the place where the sagittal and coronal sutures meet, making a depression of the bone of about four inches diameter. The common symptoms attended this accident, an universal dullness, bleeding at the nose, difficulty of breathing, with a full, irregular pulse. Twelve ounces of blood were immediately taken from her arm; and a number of physicians and surgeons being assembled, they agreed to trepan her directly, which was performed. Upon endeavouring to raise the depressed pieces of bone, they were all found separated from the neighbouring sound bone, and therefore were all brought away, and so left a terrible chasm in the skull. The membrane which inclosed the brain was covered with a pledget dipped in honey of roses, with a little tincture of myrrh. Pledgets, wet in the tincture, were applied to the skull, and the other common dressings were put on. The patient being laid in bed, an emollient clyster was injected, and procured two plentiful stools; and before night she recovered the use of her tongue, and all the other parts of her body, except the left-arm, which continued in a paralytic state for eight days.

She was kept on a low diet, and the cure went very successfully on, and was completed so far in three months, that the teguments were healed.

On the fifth day after her wound, a plate of lead had been made for covering all the dressings, which kept on all the time she was under the care of the surgeon; with two pieces of broad tape, put through four holes, one on each side of the plate before, and the other two behind, tying the ends under the lower jaw and behind the head.

Notwithstanding the wound being skinned over, the surgeon recommended the constant use of the plate of lead, laid over a compress upon the scar, to supply the want of bone, and she kept it on two months after he left off visiting her; but then, thinking herself secure, she laid it aside, and continued

continued well seven months more, when the whooping-cough, then epidemick in the place, seized her; and was so violent one night, when she was in bed, that the scar in her head was burst open, and the brain was pushed out at the teguments. The surgeon being instantly called for, found above two ounces of the brain lying on the scalp: after cleansing this away, he applied dressings, with the plate of lead over them, thereby preventing a greater discharge of the brain. The symptoms that followed this dire accident were an entire paralysis of the limbs, the patient retaining still the use of her reason and tongue, but being much inclined to sleep, with a low, depressed pulse, and palpitation of the heart; and her urine was discharged involuntarily. In this condition she continued five days, and then died.

CASE V.

Of the same.

A Gentleman, on his return home late one evening, was attacked by one of his house-dogs as he was getting off his horse. In his own defence, he drew one of his pistols, and fired; but unluckily the barrel burst, and drove the lock from the stock, so as to strike him on the upper part of the forehead. A surgeon was sent for, who treated the wound as a common contusion for five or six days; at the expiration of which, another was called in, who found the patient in a heavy drowsiness; and was informed by his friends, that for two days he had laid in that state, which was accompanied with sudden twitchings and grinding of his teeth at times; his pulse was full, but irregular, and his extremities were very cold. Having awaked him, the surgeon last called in asked how he found himself; he said, that his head and eyes were painful, and then dropt asleep. On rousing him again, the

eye opposite to the wounded side appeared to be dim; he said, he could not discern those about him; and in a moment he fell asleep again. These symptoms occasioned suspicions that the brain was injured, and the surgeon last called thought it prudent to send immediately for the family surgeon; who being come, the dressings were taken off, on which a visible fracture appeared, with the bones forced inwards; and the pulsation of the membrane which covers the brain was seen very high and strong. The patient being scalped, the trephine was applied, the depressed pieces of bone raised, and a splinter which had pierced the membranes of the brain removed: he was dressed in the usual manner; afterwards a clyster was injected, and some blood taken from his arm. The next day and the following his drowsiness continued, notwithstanding he had been bled twice. On removing the bandage and dressings, a black speck was discovered under the meninges of the brain, nearly the size of a silver penny. A lance being introduced, a drop of matter flowed out, on which the membranes were dilated with the probe-scissors, which let out near a tea-spoonful of matter; and the surgeon, with his forceps, took out the piece of the patient's hat which had been drove through the bones by the force of the upper part of the hammer of the lock, which was exactly of the same shape. Next day his drowsy symptoms abated; and after three or four days, they went off entirely. The cure was finished in the usual time, after several bleedings and a low diet.

CASE VI.

A Concussion of the Brain, without a Fracture, occasioned by a Blow with a blunt Weapon.

A Person having received a blow on the left temple, with a small confused wound, it was dressed as such by the person who

who usually attended the family, and treated as a common wound. The second or third day a fever ensued, with violent pains of the head, watchings, ravings, loss of sense, and other symptoms which accompany fractures of the skull. Another surgeon being called in about the fourth day, examined the patient, but could not discover with the probe, nor otherwise, any roughness or asperity of the bone; however, as the symptoms were violent, he removed the scalp, and the membrane which immediately covers the bone, by a thorough incision through it, though it was found, and adhered firmly to the bone; but even then he could discover neither fracture, fissure, or depression, although he had gently wiped the bare bone with lint and water. He now dressed it with dry lint on the bone, over which he placed a digestive, and secured them by the simple kerchief bandage. Twelve ounces of blood were drawn from the patient's arm, and a clyster was afterwards thrown up. Next day the symptoms were greatly alleviated; however, more blood was taken away, and the clyster repeated, which in a few hours abated his complaints. Every symptom on the fourth or fifth day disappeared; the wound had a good digestion, and he was believed to be out of danger; accordingly, the surgeon who had been last called in took his leave, committing him to the care of the family-apothecary. But it was not many days before he was again called in, the symptoms being returned and increased; for now he was afflicted with a sleepiness, and faltering in his speech; his words also were inarticulate: these symptoms, and his lethargic condition, induced the medical attendants to apprehend, that there must be a fissure, and that it had escaped their notice; they therefore made use of the rugine, and scraped the bone till the blood appeared; but even then no fissure could be found. The wound was dressed as before,

and the patient was again let blood. The next day he was seized with a paralysis of his right eye-lid, which in a few hours closed; his right-arm, side, thigh, and leg, became stiff; and soon after, his belly became hard, and almost without motion; and clysters, though of the most stimulating quality, had no effect. It being now evident that a concussion of the brain was the cause of the complaints, the trepan was applied, and the bone was taken out; on which some extravasated blood appeared on the surface of the membrane, which did not adhere to the skull internally. On examining the piece of bone, it was found, though at first it was apprehended to be cracked; for an impression of a capillary branch of this membrane had, on a cursory view, the resemblance of a small fissure, which had almost led the surgeons into a mistake; however, the symptoms abated some time after the performance of the operation.

The meninges of the brain, on removing the first dressings, pushed up through the aperture of the bone; which appearance led the medical assistants to imagine that some blood or pus was retained; and, on making a perforation with a lancet, some bloody matter flowed; the wound was then dilated, and the brain unloaded of a considerable quantity of matter.

The cure was finished in six weeks from the operation; the man became hearty, and followed the hard labours of the field without farther inconvenience.

CASE VII.

Dislocation of the Under Jaw.

A Servant of Lord W——'s met with an accident at the Windmill Inn, at Salt Hill, in attempting to gird his horse tight, and hawling the straps by the force of his teeth, a method usual amongst common fellows.

fellows. A surgeon of the neighbourhood was sent for, who, after examining the case, declared the man to be seized with a palsy in the jaw; or, according to the vulgar idea, that he was planet-struck. The poor fellow could not speak to be understood, nor swallow any thing without great difficulty; but made a noise, and shook his head, to signify that the opinion given was wrong. Some cried out that the disorder proceeded from drunkenness; and various were the opinions of the by-standers on so sudden a change in a man who was well but a minute before. As his disorder was not discovered, his lord ordered him to set out for Reading; and the people of the town through which he passed were surprized to see a man with his mouth wide open, his tongue swelled, dribbling and groaning as he passed along, and his face and head enlarged to a great degree. On his arrival at Reading, a surgeon was sent for to the inn; and examining the case, found that he had dislocated his jaws on each side, and that they must be reduced: to effect which, the surgeon's assistant was placed behind the patient, bringing his hands over his forehead, to make a counter-extension; whilst the surgeon himself, with his thumbs on the hindermost teeth on both sides, pressed the jaw downwards, and at the same time pulled forward; by which counter-actions the lockers of the jaw were restored with a little noise, and some injury to the surgeon's thumb. The servant immediately leaped off the chair, and knelt down, giving him a hundred blessings, in as distinct words as before the accident. He was, however, directed not to talk till the parts were recovered. Some blood was taken from his arm; and the next morning he set out for Bath with his lord, being only enjoined to keep on the muffler, and to live upon spoon-meats for a fortnight at least.

C A S E VIII.

Of a Locked Jaw.

A Middle-aged man, of a healthy, robust constitution, by trade a bricklayer, happened, on the 12th of April 1754, when at his work, to tread upon a large nail; which entering between the two last, or outer metatarsal bones, penetrated almost through the foot.

The day following (April 13) he was taken to St. George's Hospital; where his foot being much swelled, and very painful, he was blooded; the wound likewise was a little dilated, and a bit of stocking, which the nail had carried in with it, extracted: after which he continued easy, the wound looked well, and except a cough, which came on about the 18th, and was supposed to proceed from cold, nothing remarkable happened till the morning of the 26th of April, when he complained of a stiffness in the lower jaw, and at the same time a dry, husky cough, with a stinging pain, as he expressed it, in his breast, striking through to his back.

His pulse being quick, full, and strong, about 12 ounces of blood were immediately taken away; and being costive, he took an opening mixture. In the evening a blister was ordered between his shoulders; and for his cough, a mixture of oil of sweet almonds and spirits of hartshorn; and, at bed-time, a pill of two grains of opium.

He had but a restless night, sleeping little; and next morning (April 27) the jaw was closer and more rigid, but the other symptoms were much as the day before. The opening mixture having done little, a clyster was ordered; and after it's operation, he was directed to take half a scruple of pure musk, in common julep, every three or four hours, for as yet he could receive and swallow liquids.

The morning of the 28th, there appeared little or no variation in any of the symptoms; the musk seemed to have heated him greatly, and he was therefore prescribed small broths and gruels, as plentifully as the distemper would allow them to be given; and the musk was ordered to be continued.

He had a very restless night; and in the morning (April 29) complained much of his cough, pains in his breast and back, and of gripings in his bowels; and now the jaw was so fast locked, that he could hardly get down any nourishment at all. He moreover complained of a pain and difficulty in making water; which, as he had for years been a little subject to the gravel, was at first thought to proceed from that cause.

As he had now taken the musk for two days, in which time the distemper had evidently gained ground, it was not thought adviseable to continue it; he was therefore immediately ordered to lose nine ounces of blood (the pulse being quick and full;) after which, on account of the costiveness, a purging clyster was given, which procured two or three motions; and in the evening he took a pill of two grains of pure opium, to be repeated every three hours.

The fore-part of the night he was restless; but towards morning (April 30) slumbered a little; and by eleven he had taken in all ten grains of opium: he could now open the jaws so far as to get down thin gruels, though with difficulty; his cough likewise, and pains, seemed a little abated. He was ordered through the day a little broth or panada, as he could take them; and in the evening to go on with the opium, as the day before. He slept between two and three hours; and in the morning (May 1) had only taken three pills, that is, six grains of opium. The jaw appeared much as the day before; the pains were easier; his cough and strangury much the same; but

his pulse was quick and hurried; and he complained much of heat and cough, had a thick rash, and was the whole day very restless and uneasy.

In these circumstances it was thought best to discontinue the opium for that night, and to order him, for nourishment, broths and thin gruels; and for his difficulty of urine, barley-water, with gum-arabic dissolved in it; and in the evening (he being still costive) a laxative clyster: in the night he was very restless; and the next day (May 2) he was evidently much worse; the jaw was closer and more rigid than the day before; his pains were violent, but now more in the lower belly, shooting upwards, as he described them, into the stomach, breast, and back; his pulse was much hurried, and the rash still out.

In this unfavourable prospect, the benefit he seemed to receive from opium, April 30, and the return of the bad symptoms, after discontinuing it the 1st of May, induced the physician who attended him to make a farther trial of that medicine: he was therefore ordered one grain of opium every hour, and accordingly began it about noon; and as his pains were remarkably violent in the lower belly, a clyster, with about half an ounce of wild valerian root powdered, was ordered in the evening.

His nourishment was this day the same as before, but he could get down very little. This night he had in all about two hours sleep; and in the morning (May 3) he seemed almost in every respect better; he could open his jaw a little more; his cough was easier, as were the pains of his stomach, breast, and back; but in the lower belly they were still violent. The retention of urine was troublesome; the rash still out, though not so florid; and the pulse quick.

He was ordered one grain of pure opium immediately, and to be repeated every two hours. In the night he had between

two

two and three hours sleep; and next day, May the 4th, he seemed a good deal better; he could open the jaw a little farther, so that he now took liquids pretty easily. His pulse was much the same as before; the rash seemed going off; the strangury was less troublesome; but he still complained much of pains in the lower belly.

He was ordered to keep to the same nourishment and drinks; to take one grain of pure opium every six hours only; and in the evening to have the valerian clyster repeated.

The morning of the 5th a general amendment of the symptoms appeared; he had taken three grains of opium, and had slept between two and three hours; he complained mostly of pains in the lower belly, with costiveness, for which he was ordered a purging clyster in the evening, with a considerable quantity of liquid laudanum. The rash appeared to be going off; and two grains of opium, with five grains of asafœtida, were directed to be given at bed-time.

This day, May the 6th, his cough and pains in the breast were returned; he had slumbered but little in the night; the jaw was much as the two preceding days: as he could now take things with a spoon pretty easily, he was ordered a mixture of spermaceti, volatile salt of hartshorn, and elixir paregoric; two spoonfuls to be taken when the cough was troublesome, or the pains violent; at the same time he was directed to take two grains of opium immediately, and to repeat it at bed-time, and at five or six in the morning.

He had a quieter night; and next morning, May the 7th, the jaw was sensibly freer than the day before, and he seemed every way better, only the pains in the lower belly were still troublesome: the spermaceti mixture had disagreed with his stomach; he continued costive; and, indeed, from the beginning, he had no stools

but what were procured by purging physic, or clysters.

He was this evening ordered a purging clyster with valerian root; and a pill of two grains of opium to be taken going to rest, and repeated in the morning.

May the 8th, all the symptoms looked more favourable; and, for the first time, a remarkable alteration for the better was perceived in his pulse: as, therefore, he could now take things, whether food or medicine, pretty easily, (yet the jaw seemed to mend but slowly) it was judged advisable to try the antispasmodics; accordingly, half a dram of wild valerian root powdered, was ordered, with the camphire julep, three times a day; and two grains of opium at bed-time.

In the night he slumbered but little: however, the next morning, May the 9th, the pains were much abated; he now made water freely, and his pulse was quieter; but still the jaw was much confined in it's motion; besides, in moving it, he complained of a pain at the articulation: for this, two small blisters were applied behind the ears, and a pill of two grains of opium given at bed-time.

The night of the 9th was the first in which he could be said to have had tolerable rest; he slept five hours; and the next day, May the 10th, he had, for the first time, a natural stool. He had now evidently both a better pulse, and a much greater opening and flexibility in the jaw: from this day, therefore, the chief attention was to his diet; however, the antispasmodics were continued for two or three days longer. A laxative mixture was directed to be taken occasionally, and a pill of two grains of opium at bed-time.

The 13th he eat a bit of pudding and chewed a bit of bread for the first time.

The 14th, 15th, &c. he continued gaining ground, though slowly; but being very anxious to return to his family, he was permit-

permitted to become an out-patient the 22d of May, although even then the jaw was not so free and flexible as it ought to be.

When out of the hospital, he continued to take, every night, an opiate pill, sometimes of one, and sometimes of two grains, till Friday, June the 7th, when he left off all medicine; and on the Wednesday following, June the 12th, came to the hospital, and returned thanks for his cure. In the space of twenty-two days he took about ninety grains of opium.

CASE IX.

Of Convulsions occasioned by Wind in the Stomach and Bowels.

A Woman, aged 41, was seized with convulsive twitchings on the left side, accompanied with a most acute pain under the short ribs, shooting towards the region of the stomach. These fits continued from half an hour to three hours at each attack, coming on mildly at their commencement, but increasing in violence and pain to such excess as to excite convulsions through the whole day; under which the patient appeared to suffer the most excruciating torture, till at length (nature being exhausted) she sunk into a state of stupefaction, and in a short space of time regained her usual strength. In some of these fits, a spontaneous vomiting ensued, which terminated them sooner, but no particular matter was ejected.

These convulsions sometimes occurred two or three times a day; at other times she enjoyed a week's respite; but during the intervals between them, her health constantly returned: so that her life consisted of vicissitudes of perfect health and painful disease.

Her periodical evacuations had not ceased, though they had diminished in

quantity; and her countenance had a freshness and colour, denoting healthiness and vigour.

Besides laxative remedies, she had tried bleeding, camphire, volatiles, blisters, bark, acids, alkalies, flowers of zinc, and ætids in various forms, agreeable to the directions of physicians at home and abroad, but without benefit.

From the frequent eructations of wind she passed, joined with the other symptoms, it was apprehended that flatulence in the stomach and bowels principally excited this dreadful disease; and that, besides opiates to quiet the convulsive motions, it was necessary to absorb the superabundant air, which seemed detached into these internals, and sometimes extended them sensibly to the touch.

As the spontaneous vomiting always contracted the duration and violence of the fits, she was ordered to take an emetic draught every week.

And also four ounces of lime-water to be drank three times a day, in order to absorb the fixed air which might be let loose from the aliment, and accumulated in the intestines.

For the same purpose, and likewise as an antacid, two drams of calcined magnesia were recommended three times a day, and one dram of the paregoric elixir was administered once a day at least.

Diet of easy digestion, and the least flatulent, was at the same time advised.

The first week she experienced ease.

This excited perseverance; the fits gradually diminished in violence and frequency; and in the space of two months, nearly subsided, at which time the elixir was omitted.

She continued to take calcined magnesia and lime-water for a week afterwards; after which her health appeared to be restored and uninterrupted, without the use of any medicine.

CASE

CASE X.

Of Rheumatic convulsive Pains about the Loins.

A Person about 35 years of age, robust, and of a bilious constitution, had his pores closed up, perhaps by a sudden cold caught after hard labour. As soon as he was taken ill, he became feverish, having first a shivering cold fit, and next a hot fit, with wandering pains at one time in the stomach and intestines, and at another time in the breast; but these symptoms were soon changed into others. The morbid matter was lodged all in the patient's back, occasioning such violent pains from the loins downwards, that great drops of sweat run down his hair and face, so that he could not lie in his bed, sit, or stand; and the only posture that seemed to give him any relief from the pains in his loins was compressing his belly against the bedstead; though he could not continue easy for any time even in that posture; for being seized with convulsions, he would raise himself up with a distorted mouth and frightful countenance, and then fall back upon the ground (unless some person was at hand to prevent it) where he lay for dead, not being able to move himself, and having no more strength to get up than a child. At which time his arms and legs became so stiff, that they could neither be drawn up, nor stretched out. His mouth was convulsed in such a manner, that a spoon could hardly enter it: the convulsions in his back and limbs returned by fits, which were not periodical, but at one time sooner, at another time later, according to the greater or less violence of his pain. This poor patient at one time lay against the bedstead for about three weeks, never lying down on the bed; and during all this time had little sleep, but remained in the most exquisite agonies,

with frequent convulsions. These were the symptoms of the disorder, the patient being otherwise in a good state of health. He had no inclination to vomit; his pulse was strong and equal; his tongue was moist, covered with a whitish pellicle; the blood taken from him looked like that in pleuritic cases, his urine like that of persons in health. This was the patient's situation when a physician was called in, who was at first at a loss what course to take: however, in the first week, the patient was once blooded, had a clyster; and a purge administered to him, together with a large quantity of laudanum; but all to no purpose. At length, after the physician had seen him in the misery above described, he ordered the bleeding to be repeated to a pretty large quantity. The next day he prescribed a gentle purge; which giving the patient three or four stools, he could walk upright without any pain or convulsions. But the operation was no sooner over, than both these symptoms immediately returned, and the patient to his accustomed posture against the bedstead; yet some hopes were entertained that repeating the purge might effect the cure, as the first dose had given some respite. The following day resin of jalap and sweet mercury were administered, but it did not answer, for the patient had not one stool, though two ounces of syrup of buckthorn had been added; on which account the dose was increased by adding every day alternately three or four ounces of the syrup of buckthorn. At length by this means his belly was kept open, the pain abated, and the convulsions did not return so frequently as before. The patient was now permitted to drink as much whey as he pleased; and since these purging medicines had operated on the patient, laudanum could be more freely and safely prescribed, to procure rest to the spirits, agitated both by the disorder and the physic. Thus, at length, by repeating the

purge eight or ten times, the pain was quite gone, the convulsions ceased, and the patient was pretty well recovered. In the mean time, to prevent a relapse, medicines proper in nervous disorders were applied, to invigorate the blood and spirits. The patient's legs swelled as he recovered; but the tumor was soon dissolved by the application of the last-mentioned medicines, and he soon regained his strength so as to return to his labour.

CASE XL.

Of a ruminating Man.

THIS ruminating man lived at Bristol; he would begin to chew his meat over again within a quarter of an hour after his meals, if he drank upon them; if not, it was some time longer. This chewing after a full meal lasted about an hour and an half; if he went to bed presently after meals, he could not sleep till the usual time was over. The victuals, upon their return, tasted somewhat more pleasant than at first. Bread, meat, cheese and drink, seemed to retain much of the same colour they would be of were they mixed together in a mortar. Liquids, as broth and spoon-meat, returned to his mouth the same as dry and solid food. The victuals seemed to the patient to lie heavy in the lower part of his throat, until they had undergone the second chewing; afterwards they would pass clean away; and he always observed, that if he eat variety of things, what he swallowed first would again come up first to be chewed. If this faculty intermitted at any time, it portended sickness, and he never was well till it returned again. The patient was always thus affected since he could remember. His father sometimes chewed his cud, but in small quantities, and nothing like his son.

CASE XII.

A sudden and excessive swelling of a Woman's Breast.

ELIZABETH TREVERS, aged 23 or 24, of a fair complexion, and of a healthy constitution, was, on July 3, 1669, in good health, and slept well that night; but in the morning when she awaked, and attempted to turn herself in the bed, her breasts were swelled to such a degree, and became so heavy, that she could not stir; yet without any pain or weakness in her breasts, or any other part. A physician being called, advised the use of an emollient warm fomentation; and once he gave a bolus, which operated ten times downwards, and the swelling abated a little; yet she was so weakened by it for two or three days after, that he durst not attempt to repeat it; but on account of the suppression of the monthly discharges, he prescribed some diuretic and opening medicine. The tubuli, or pipes of the breast, were very hard; and indeed the whole breasts seemed to be nothing more than those tubuli, and with little or nothing of wind or water. The left breast weighed, as near as could be guessed, about 35 pounds, but the right somewhat less; and the skin of the back, neck, and belly, seemed to be drawn towards the breast, to serve for increasing the distension. The circumference of the right breast was two feet seven inches; of the left, three feet one inch and a half; the length of the right breast from the collar-bone, one foot five inches and a half; the length of the left breast one foot seven inches and a half; the breadth of the right breast one foot one inch; and that of the left one foot four inches and a half.

About the beginning of September she coughed up, at several times, some blood, but this was soon taken off; and at that time

time there appeared several ulcers in the skin of her breasts, and other parts, especially a great many on the pudenda; which last were cured, but those in her breasts remained in part, and discharged a great deal of matter, by only applying colewort leaves. She complained of grievous pains in her joints, especially on the shin-bones.

She died October 21; and the next morning, cutting off her left breast, it weighed 64 pounds weight; and on opening it there was found neither water, cancerous humour, nor any other thing more than it's extraordinary bulk. The tubuli and flesh were white and solid, and exhibited no different appearance from the soundest breasts of women, or udders of other animals. This woman had lost her stomach, and could not sleep for several weeks before she complained much of her breasts from their great distension, and her whole body was exceedingly emaciated. The breadth of her two breasts was three feet two inches and an half; their circumference, lengthways, four feet four inches; and the circumference of the breadth three feet four inches and an half. The right breast was not cut off, but it was supposed to weigh 40 pounds.

CASE XIII.

Of Stones in the Bulb of the Urethra.

A Young man, about 19 years of age, had laboured under a suppression of urine for several days without relief; and was attended by an eminent apothecary and surgeon, who had attempted ineffectually to draw off the water. On calling in another surgeon, he found a tumor near as big as a small pullet's egg, on the interior part of the root of the penis, on the left side; which seemed to run downwards near the bulbous part of the urethra, or neck of

the bladder. The urinary passage was so greatly distended, that it was very visible, and to be felt above the basin of the pubes; and the surgeon observed the vestiges of a former wound in that part which is cut in the high operation for the stone, which the patient said was made when he was about four years of age, at which time a very large stone had been extracted from him. On examining the swelling, some hard bodies might be both heard and felt; which were apprehended to be stones; and that either the cavernous part of the urethra, the membranous coats of the neck of the bladder, or the bladder itself, had suffered a violent extension by the long and continual obstruction of urine, and that therefore the only method for relief was opening the tumour: accordingly, a lancet was thrust in, from which followed near three pints of urine, of a very offensive smell, and of different colours, with some small gravel; the wound was then dilated downwards, and the director, which is used for cutting in the lateral method, was introduced; on which a small pair of extracting forceps were guided into the neck of the bladder, and upwards of 60 fine smooth stones taken away, some of which were as large as common nutmegs. The scoop was afterwards introduced, which passed very easily, (as it was supposed) by it's length into the bladder, and drew out some very small stones, about the size of rape-seed; these also were as smooth as China-ware, and polished to the highest perfection, but of different shapes.

The wound was dressed at first like those of the common ulcer-kind, and the proper precautions were observed. The next day fomentations, with the usual dressings after the operations for the stone, were applied. It was near forty hours before any considerable quantity of urine came through the wound, which might be occasioned by a slight inflammation, contracting or closing the internal lips of the neck of the bladder, since

since, doubtless, they suffered somewhat by the introduction of the forceps and director. Afterwards the water, and with it now and then a small stone, continued it's passage this way for near three weeks, which made it necessary to dress twice a-day. This difficulty was got over by good compresses and bandages, and the water began about this time to take it's natural channel. Something of this kind was necessary to prevent the danger of leaving a fistulous, incurable ulcer: and because there was also some hazard of the external wound healing before the internal parts of the urethra or bladder, therefore small pledgets of soft lint, armed with a liniment, were gently placed at the bottom of the wound. In about eight weeks the cure was finished, and he made water in all respects as well as ever.

CASE XIV.

Of a Needle run into the Arm, and extracted at the Breast.

A Woman working with a small needle, stuck it upon the sleeve of her gown, whilst she did somewhat about her house; but by her accidentally running against a door, she drove it, with some thread twisted about it, into her left arm, about six inches below her shoulder; and a young woman who was by endeavouring to draw out the needle, broke off the eye of it, and left the needle in her arm; upon which she directly applied to a surgeon, who endeavoured to extract it, but could not without laying her arm open, which she would not suffer. About a month after the accident, she felt a gnawing pain above the place where the needle ran in, and up to her left shoulder, which lasted three or four days, and so returned by fits, till at length she felt a like pain (as she thought) at her stomach, which made her very sick,

and brought on reachings to vomit, and continued to afflict her, especially in the mornings, till about a month after the accident; when one day towards the evening, she fancied a pin was got into her right breast, in the under part; and two days after applied to a surgeon, who the same day lanced her breast, and extracted the same needle, as she verily believes, which entered her arm, as it had no eye, but the thread twisted round it. From the time the needle was so drawn out, she had never any return of pain in her breast, stomach, shoulder, or arm.

CASE XV.

Of a Mortification.

A Gentleman 67 years of age, who all his life-time before had enjoyed a perfect state of health, applied to a surgeon on account of a mortification, which began about a month before on one of his toes, and by gradual advances in that time, had reached half way up his leg, and this without any manifest cause. He saw himself dying daily by piece-meals, but heart whole, (as he expressed it) and had a pretty good pulse. Amputation was immediately proposed as the only remedy, which he was told would give him some chance for his life, though the odds were against him. This he readily consented to; and as soon as dressings could be got ready, the operation was undertaken. The leg being taken off at the usual place, which was about four inches above the mortification, about two or three ounces of blood issued from the muscular part; but upon slackening the tourniquet, in order to look for and tie the artery, not one drop of blood flowed, to the great surprize of the operator, who, upon feeling the extremity of the artery, found it hard and callous: however, he secured it by a ligature as usual, and dressed the stump.

stump. The patient, who had borne the operation with the greatest resolution, being put to bed, the surgeon proceeded to examine the leg; and having dissected the artery, with it's two considerable branches, as far as the knee, he found them for the most part ossified, or hardened to bone; that is to say, the trunk, where it was amputated, was hardened about two-thirds of it's circumference: about a quarter of an inch lower, the whole was bony, leaving so small an orifice, that it would only admit of a hog's bristle, and not a very fine probe, which was endeavoured to be introduced. A little lower, it was on one side bony, on the other membranous, then again an entire case of bone; and here and there, for the breadth of a barley-corn, there would be no bone at all. About two inches of the internal branch being opened immediately above the ankle, and appearing blacker than the rest; after it had been washed, about two or three drops of coagulated blood were found in it; and after it was expanded and dried, it was one entire scale of bone, as thick as the shell of a pigeon's egg, and of an unequal surface. Three ramifications of this internal branch in the foot being dissected, only one of them had a very small piece of bone in it, about half an inch from the trunk. The other great branch which runs on the ligament that ties the branches together, was not so much ossified as that which has been described; the bony shell was contained within the coats of the artery. This ossification was no doubt the cause of the mortification, and of the patient's death, which followed four days after the amputation.

CASE XVI.

Of Excrements discharged at an Ulcer in the Groin.

A Poor woman, of about 40 years of age, belonging to the town of Aulcester, in the county of Warwick, return-

ing home from a neighbouring village, was suddenly taken with a violent pain in her right groin, which was accompanied with strong hiccups; a small swelling appearing there, about the size of a nutmeg, in the space of half an hour's time after the seizure; which swelling became by degrees hard, and at length black. The woman thus seized with a fever, and other intense pains, having no medical assistance, and not knowing any of the by-standers, was by them recommended to God by public prayers, as one about to depart this life; but at length, by the application of a poultice, the composition of which is not mentioned, the swelling broke, and from the wound was discharged whatever she eat or drank, for the most part unaltered, in about the space of a quarter or half an hour after eating; the discharge being made with little or no pain, either in the ulcer or intestine. Thus one day she eat some boiled milk; after which, was discharged first the milk by itself, and afterwards milk curdled, with a noise and froth like the breaking of wind from the anus. At length a physician being called, found the woman hectic, emaciated, thirsty, and discharging her urine and excrement without any pain, at stated times. The ulcer appeared to be two or three inches long, and half or two-thirds of one broad, but not deep, being almost level with the skin. A laxative ptisan was now ordered to be taken in four doses; but as the first dose was immediately discharged through the ulcer, without producing any stool that day, a purgative bolus was given, part of which was also evacuated from the ulcer in the space of half an hour after taking; yet the patient had afterwards two stools, and the discharge from the ulcer was much less than before. The next day she took the like bolus again, which gave her three large stools, bringing away many hardened fæces; while in the mean time the ulcer discharged little or nothing during the whole night. After this

she was ordered to drink two^{or} three pounds daily of a drying and vulnerary drink, repeating the same bolus at intervals; and by these means she was cured within the space of fourteen days.

CASE XVII.

Of a corroded Shin-Bone.

A Lad, ten years of age, had the misfortune to receive a blow with a ball on his right-shin bone: however, the pain it occasioned was soon over, and consequently the lad took no longer any thought about it. His parents also little imagined that this blow would have had those bad consequences which declared themselves a little time afterwards: the part began to be painful, looked red, and swelled; all the care taken by the application of discutients was to no purpose. The inflammation collected into a tumour, which opened itself, and was treated like other sores. In time it ceased, and was thought to have emitted only a putrid matter.

Application was at length made to a surgeon, who carefully examined the ulcer, and immediately perceived that the larger bone of the leg, or shin-bone, was not only affected, but also somewhat dislocated; a hard kind of protuberance, as large as a goose-egg, could be felt in the ulcer. The trepan was now used; upon which a large quantity of thick matter oozed through the opening.

As it was necessary to see how far the bone was tainted, the ulcer was opened wider, and then the corroded part of the shin-bone appeared to be about four finger-breadths long. It had several fissures. Upon being squeezed on the sides, a thin foetid matter ran out, and it yielded to an impression.

This corroded piece of bone being quite mortified, there was a necessity of immediately taking it out; for though it might be conceived that it would soon be-

come so loose as to be entirely taken away with much more safety and ease, yet the bone would thereby be rendered shorter, and crooked, and thus occasion a lameness. The small bone, at the patient's tender age, appeared too weak against such an unhappy effect, when so many and such long muscles were exposed to a contraction; and by a longer delay it was apprehended that the mortification might spread. Another danger was, that some of the matter might, through the tubes, reach the veins and blood, which would infallibly bring on a consumption. On the other hand, the piece of the bone being already trepanned, the matter issuing through it's fissures, and the side of it being considerably loosened, it was hoped that a short delay would be attended with no detriment, or rather be a relief to the patient; and the surgeon was also very desirous that the fissures might be turned to some advantage, and was not without hopes that they would gradually enlarge, so that the pieces might successively be taken away, always leaving something to prevent the contraction of the muscles, till a callus should be produced to supply the places of the pieces taken out. Nature here assisted exceedingly; for about half of the corroded bone became so loose, as to be taken out without the least difficulty. At the same time also the other half might have been extracted, but it was deferred for some time for the purpose above-mentioned, which was by this means accomplished; but with this inconvenience, that the wound inclined to heal, and the tumefied flesh was grown so far over it, that in taking out the piece which had been left behind, the young patient suffered more than in all the former part of this cure. However, a callus succeeding in the place of the piece taken out, the child perfectly recovered, had both legs of an equal length, and used them with the same ease and activity as before the accident.

C A S E XVIII.

Of a Pistol shot through the Breast.

A Privateer returning from her cruize into port, the fire-arms were ordered to be unloaded and cleaned; but it happened that one of the pistols, after several attempts, would not fire; and the gunner gave it to a mate, who carelessly snapping it, it went off, and shot him. The ball entered his breast between the sixth and seventh ribs, about the midway between the breast-bone and back-bone, and came out close to the lower part of the shoulder-blade near the spine.

The man being brought ashore, a surgeon was called in to examine the case: the wounded man was very low, pale, almost dead, and scarce able to speak; and the blood ran out of the wound whether he was laid on his face or on his back. Twelve ounces of blood were ordered to be taken from his arm, and a clyster of sea-water was thrown up, which gave him some stools. In the mean time, the upper part of his body was rolled up with linen cloths dipped in oxycrate; and for coolness, as the weather was extremely hot, he was laid on the floor, with one blanket under him. In about two hours after, six ounces more of blood were taken away, and the stained cloths were removed, whilst others were applied, very wet with the same liquor. Two hours after, he was a third time blooded, and the cloths were renewed by clean ones, wetted as before: in about four hours more, five ounces of blood were again taken away, and fresh cloths, dipped in oxycrate, applied. He now complained of being chilly, and the cloths were not discoloured. The next morning the cloths were removed, and the wounds examined, and dressed in the usual way. In four or five days, the lips of the wounds began to be enflamed, and afterwards to suppurate, having discharged a bloody

thin matter for some days before: they then digested and healed, without any trouble, in about three weeks. He appeared a walking ghost for some time, but recovered his strength in about nine weeks, and went again a privateering.

C A S E XIX.

Of a singular Recovery from a Fever.

A Young lady, about the 30th year of her age, was seized with a fever, which continued about ten days, and then left her very weak. Three days after her recovery, she caught cold, which brought on a relapse. For the two first days after the return of her fever, she had a sickness and vomiting, which prevented her taking any nourishment. These symptoms disappeared with the use of the saline draughts, but were succeeded by profuse sweats, which weakened her extremely. A blister was ordered to her back, some cordial boluses, and a few drops of the antiphthical tincture. Her sweats disappeared the next day; but she suffered very much from the strangury, and complained of being oppressed with wind in her stomach and bowels; the uneasiness she was under from these complaints preventing her getting any sleep, which she very much wanted, not having had any since the time of her relapse; and after they were removed, she slept very little, and observed that the short sleeps which she got were not refreshing. About the fifth day, she began to be affected with twitchings; and her weakness was such as not to permit of her being raised up in bed without fainting. Her pulse was small and quick, and was not to be kept up but by a frequent repetition of warm cordial medicines; for when she continued long without something of that kind, her pulse was quite depressed, and her twitchings more violent. On the eighth day she had all the appearance of a person at the last extremity: blisters, which had

had been laid above her ancles the night before, had not risen at all, or given her the least pain. The twitchings were constant, and sometimes so violent, that she appeared to be quite convulsed. She had a pale, sunk countenance, with a livid stroke on each side the nose, together with a convulsive laugh; and her sweats had that earthly kind of smell which is frequently perceived from such as are near their end. She had hitherto had no sleep that had done her any service, as it was always of short duration, and left her flurried and discomposed, and sometimes even convulsed.

Particularly this evening she waked from a short sleep, in such agonies, that she said she was not able to survive such another struggle, and begged that some person might watch her for the rest of the night, and prevent her going to sleep: but it was suggested to her that she might venture to go to sleep, provided her physician attended all the while to her breath and her pulse; and in case they failed, awaked her before she could suffer much from this kind of suffocation.

She readily agreed to this proposal, after being assured that she would not be in danger of suffering as before: she was very much disposed to sleep, and had been kept from it only by the dread of its consequences. The physician kept his hand constantly upon her pulse; and it was not long before he perceived her to be asleep. It did not appear to be above half a minute before her pulse stopped, and she could not be heard to breathe: she was then immediately waked; and agreeably surprized her attendants, by saying, that she had had a very refreshing sleep, for she seemed not sensible how short it had been. She was then advised, as soon as she had recovered her breath, to compose herself again, which she did, and her second sleep was about twice as long as the first. When her breath and pulse failed, she was awaked

again, and expressed the same satisfaction as before. In continuing this method, her sleep was every time of longer duration than the preceding; her pulse grew apparently stronger and fuller, and her twitchings were less frequent. It was about midnight when she began to sleep; and betwixt two and three in the morning she complained that the blisters above her ancles were very painful. During the time the physician was attending her pulse, it once happened that he fell asleep himself, and let her continue too long before he awaked her: she was very sensible of his neglect from what she felt, and begged of him to be more attentive. However, betwixt four and five in the morning, her strength was so much improved, that she could sleep without danger.

The next day her blisters had rose very well, and her fever left her; but in so weak a condition, that she was constantly in hystericks for the two succeeding days, being always either laughing or crying whilst awake, and making sudden transitions from the one to the other on the most trifling occasions. Nevertheless, she afterwards recovered her health and strength in less time than could well have been expected.

CASE XX.

Of a Catalepsy.

IN the latter end of the last year, Dr. Jebb was desired to visit a young lady, who for nine months had been afflicted with that singular disorder termed a *catalepsy*. Although she was prepared for the visit, she was seized with the disorder as soon as his arrival was announced. She was employed in netting, and was passing the needle through the mesh; in which position she immediately became rigid, exhibiting, in a very pleasing form, a figure of death-like sleep, beyond the power of art to imitate, or the imagination to conceive.

Her

Her forehead was serene, and her features perfectly composed. The paleness of her colour, her breathing at a distance being also scarce perceptible, operated in rendering the similitude to marble more exact and striking. The position of her fingers, hands, and arms, was altered with difficulty; but they preserved every form of flexure they acquired: nor were the muscles of the neck exempted from this law; her head maintaining every situation, in which the hand could place it, as firmly as her limbs.

Upon gently raising the eye-lids, they immediately closed, with a degree of spasm. The iris contracted upon the approach of a candle, as in a state of vigilance; the eye-ball itself was slightly agitated with a tremulous motion, not discernible when the eye-lid had descended.

About half an hour after his arrival, the rigidity in her limbs and statue-like appearance being yet unaltered, she sung three plaintive songs, in a tone of voice so elegantly expressive, and with such affecting modulation, as evidently pointed out how much the most powerful passion of the mind was concerned in the production of her disorder; as, indeed, her history confirmed. In a few minutes afterwards, she sighed deeply, and the spasm in her limbs was immediately relaxed. She complained that she could not open her eyes; her hands grew cold; a general tremor followed; but in a few seconds, recovering entirely her recollection and powers of motion, she entered into a detail of her symptoms, and the history of her complaints.

She informed him that she had no recollection whatever of what passed in the fits; that upon coming out of them, she felt fatigue in proportion to the time of their continuance; and that they sometimes lasted for five hours, though generally for a much shorter period.

She farther related, that the fits returned once or twice a day, sometimes more frequently; but that she was never troubled with them in the night. She sometimes lost her sight and speech, the power over her limbs and intellectual faculties remaining unimpaired. The fits frequently attacked her without any previous warning; at other times, a fluttering at her stomach, and a fixed pain at the top of her head, occupying a part which she could cover with a finger, announced their approach.

Hysterical risings in her throat, appearances of fire, pains in her eyes, and not unfrequently in her teeth, flatulence, a sense of weight in her stomach after eating, with convulsive motions in the region of that organ, were superadded symptoms, of which she much complained.

Her disorder was evidently exasperated at the approach of the catamenia, which were constantly present at the regular period. She was always much agitated previously to a storm of thunder; and every material alteration of the weather produced a sensible effect.

After she had discoursed for some time with apparent calmness, the universal spasm suddenly returned. Her features now assumed a different form, denoting a mind strongly impressed with anxiety and apprehension. At times she uttered short and vehement exclamations, in a piercing tone of voice, expressive of the passions that agitated her mind; her hands being strongly locked in each other, and all her muscles, those subservient to speech excepted, being affected with the same rigidity as before. During the time of his attendance, similar appearances were frequently exhibited. The physician was informed by the family of many particularities in the access of the disorder, all denoting its instantaneous effect upon the nervous system. She once was seized in his presence

while drinking tea, and became universally rigid at the instant she was advancing the tea-cup to her mouth. Her tears sometimes flowed copiously, while every internal as well as external sense seemed locked up in sleep.

It appears, that for many years before the access of the cataleptical symptoms, she had suffered much from violent headaches, particularly that species of head-ache termed *clavus hystericus*, the hysteric head-ache. Her spirits were easily discomposed. Her fingers, upon touching cold substances, would frequently lose their natural heat and feeling. Her habit of body had been uncommonly costive, but of late her bowels were much disturbed by every kind of laxative. Her nervous complaints were always particularly troublesome at the approach of rain, and after a sleepless night.

Her disorder commenced with hysteric fits; to these succeeded a delirium of several days continuance, attended with slight shiverings, but no other sign of fever. The catalepsy followed next in order, which at first affected her with only single fits, at a week or fortnight's interval: these gradually advanced in strength and frequency; until, by her own sufferings, and her sensibility on account of the anxiety of her friends, she was reduced to the most pitiable distress.

Before Dr. Jebb saw her, she had been under the care of a physician of eminence in the country, who had attended to her case with singular humanity, and had prescribed various medicines of the nervous kind, which at one time produced so favourable an effect, as even to flatter with the prospect of a cure; but the symptoms returning with increased violence, through fresh anxiety of mind, the same course of medicine was not attended with the same success.

Musk, opium, and bark, the latter of which did not always agree with her bow-

els, were found most effective. Of musk, she had taken to the amount of a dram and a half each day. It's use removed a sense of chillness, of which she before had much complained. A few drops of laudanum at the hour of rest had also been attended with advantage.

After her physician had tried Hoffman's mineral anodyne liquor, essential oil of camomile flowers, oil of amber, extract of Hemlock, prepared rust of steel, salt of amber, camphire julep; and opium in a great variety of forms, without much advance, he found the following application had an evident good effect.

Take purified opium and camphire, of each one dram; of the stomach plaister, as much as will mix with these ingredients: make a plaister to be applied to the region of the belly.

Observing the effect of this application, and reflecting upon the many tokens of debility which her stomach exhibited, he directed his attention to the strengthening of that organ; and notwithstanding the discouraging circumstances that had formerly attended the exhibition of the bark, determined to make another trial of it's power.

He chose the following form of preparation, which Dr. Whytt had found to be particularly serviceable in hysterical complaints.

Take of Peruvian bark powdered, two ounces; gentian root and peel of Seville orange, of each six drams. Mix and infuse these ingredients in a quart of French brandy for six days, in gentle heat.

Finding, upon trial, that half an ounce of this tincture, the quantity directed by Dr. Whytt, though diluted with two ounces of water, was more than her stomach would bear, he prescribed as follows,

Take

Take of pure water an ounce and a half; of the tincture prescribed, two drams; of compound spirit of lavender, one dram. Make a draught to be taken twice a-day.

Instead of the common kinds of tea, he advised her to drink an infusion of the outward rind of lemon, which appeared particularly grateful to her taste and stomach.

She declared that she felt immediate benefit from this prescription.

She took some drops of Hoffman's anodyne liquor, or of laudanum, as occasion appeared to require.

She persisted in this course with evident advantage. Her fits grew less frequent, returning faintly after a week or fortnight's interval; her spirits were improved, her strength increased; until at length, without the use of any other medicines, she became intirely free from all complaint.

C A S E XXI.

Of the Effect of Imagination in a pregnant Woman.

A Female child was born with a wound in her breast above four fingers long: it penetrated to the intercostal muscles; and it was at least an inch broad, hollow under the flesh round about the wound; besides that, there was a contusion, with a little swelling at the lower part of the wound in the inside. The child came into the world without any violence, and consequently it did not receive this wound in it's birth, but it was caused by strength of imagination; for about two months before, the mother had, by chance, heard a report, that a man had murdered his wife, and with a knife had given her a great wound in her breast; at which relation she seemed affected, though not excessively.

It is probable that the child received the wound in it's mother's body at that very moment that she was affrighted; because the wound was very foul, and the inside, as

well as the outside, was beset with slime, proceeding from the water wherein the child lies in it's mother's womb; and it was also like an old wound.

C A S E XXII.

Of a Girl with horny Excrescences.

THIS girl was called Anne Jackson; and was born in Waterford, of English parents, who were both said to have been sound and healthy. This infirmity did not shew itself till she was about three years old; and at the time this case was drawn up, she was about 13 or 14 years of age, yet could scarce walk; and was so low in stature, that many children of five years old are taller. She had very weak intellects, spoke but little, and that not plainly, but hastily, and with difficulty. Her voice was low and rough; her complexion and face well enough, except her eyes, which looked very dull, and seemed to have a film or horn growing over them, so that she could hardly perceive the difference of colours. The horny excrescences abounded chiefly about the joints and flexures, and not on the brawny fleshy parts of her body. They were fastened to the skin like warts, and about the roots resembled them much in substance, though towards the extremities they grew much harder and more horny. At the end of each finger and toe, grew one as long as the finger and toe; not straight forwards, but rising a little between the nail and the flesh, (for near the roots of these excrescences something like a nail appeared) and bending again like a turkey's claw, which, too, it much resembled in colour. On the other joints of her fingers and toes were smaller ones, which sometimes fell off, others growing in their places. The whole skin of her feet, legs, and arms, was very hard and callous, and grew daily more and more so. On her knees and elbows, and round about the

the joints, were many horns; two more remarkable at the point of each elbow, which twisted like rams-horns: that on the left arm was above half an inch broad, and four inches long. On her buttocks grew a great number, which were flatted by frequent sitting; at her arm-pits, and the nipples of her breasts, small hard substances shot out, much slenderer and whiter than the rest: at each ear, also, grew a horn. The skin of her neck began to turn callous and horny, like that of her hands and feet. She eat and drank heartily, slept soundly, and performed all the offices of nature, like other healthy people, except that she never had the evacuation usual with her sex.

C A S E XXIII.

Of a Fever.

A Pregnant woman, 28 years old, who daily expected to be brought to bed, was attacked on the 9th of January with wandering rheumatic pains, especially in her shoulders and arms; and at the same time had a disposition to a diarrhoea. On the 11th in the morning she was seized with a violent shivering, which was succeeded in the evening by labour pains; but as she was disappointed in her midwife, the child was born without any assistance, and the mother suffered greatly by contracting fresh cold; a fever, with increase of her rheumatic pains, and a diarrhoea, ensued.

On the 13th, the third day after her delivery, she took a rhuarb draught, and a cretaceous mixture was ordered to be given every six hours after.

On the 14th, the fever was very considerable; she had a quick, depressed pulse, 125 in a minute; the diarrhoea was increased, and the stools were dark-coloured and very foetid; the tongue was dry, and a drowsiness came on; but neither the usual discharges after child-birth or the milk

had appeared. There was no tightness or pain in the belly, except some griping from the loose stools. The hands and arms were so swelled, that it was difficult to feel the pulse; and so inflamed and sore, that she could hardly bear the touch of a finger. No urine was saved. A cretaceous mixture was ordered, with a little cordial confection and liquid laudanum, to be taken after every stool.

On the 15th, she was nearly the same as the day before, excepting that the diarrhoea was a little abated.

On the 16th, the fever and diarrhoea were increased; the tongue was very dry and brown; and a miliar eruption appeared. The medicines were changed for the compound powder of bole without opium.

On the 17th, her friends, believing she must inevitably die, opposed giving any medicines, that she might not be disturbed; but being persuaded there was a chance for life if they would still exert themselves, they complied with the directions of the physician. She appeared much worse, her stools were voided insensibly, and very frequently. And as it was now plainly perceived that the fever was of the putrid kind, and that the patient must fall a victim to it unless speedily relieved, the following was prescribed.

Boil one ounce of the powder of Peruvian bark gently in sixteen ounces of pure water till it is reduced to twelve. Give four ounces every hour.

But from the particular disposition of her friends, her physician could not procure any farther admission of fresh air, than by opening the door now and then.

On the 18th, the fever, diarrhoea, and other symptoms, were much as the preceding day; and as it was found that the frequent repetition of so large a draught of decoction of the bark could not be dispensed with, and that this and every thing
taken

taken presently, passed off by stool, the following was substituted.

Take of Peruvian bark bruised, one ounce; boil it gently in twelve ounces of water till it is reduced to six; strain it off, and add of tincture of cinnamon two ounces; of this mixture give two common table-spoonfuls every hour.

On the 19th, the stools were equally frequent, though not quite so foetid, and a small remission of fever was observed. Three drops of liquid laudanum, were added to each dose of the decoction of bark, which was continued every hour as yesterday.

On the 20th, a remission was rather more evident than yesterday.

On the 21st, there was a distinct, though short intermission of fever, in which she slept a little, and awaked rather refreshed and less wandering. The diarrhœa continued the same.

On the 22d, the fever and diarrhœa were abated. She had some refreshing sleep, and was more sensible. The tongue became moist, and in three days from hence, the miliary eruption and all signs of putridity went off. Perceiving that her arms and legs, which had been highly inflamed and sore during the fever, were now swelled; that the blood was much impoverished, and the whole vital power greatly impaired; she was urged to take some medicines farther to corroborate and hasten the recovery of her strength, but she refused. The swellings of the arms and legs were formed into abscesses, which broke, and continued a long time discharging matter; but all gradually healed as she recovered strength.

CASE XXIV.

Of extraordinary Costiveness.

ONE Thomas Phillips, of Eastthorp, near Keldon, in Essex, was well in every respect till he was a year and a quarter old;

at which time a very strange, and almost continual rumbling in his intestines, seized him; the consequence of which was a violent looseness, for which all the physicians near the place could find no remedy; but at length, when the child's life was despaired of, the looseness terminated in such an obstruction, that he did not go to stool for a fortnight or three weeks together; and from three weeks it proceeded gradually to the intervals of seventeen or eighteen weeks, and continued so till he came to be about the age of fifteen, when his body resumed it's natural temper, which lasted four or five years; but then the obstruction returned, and it increased till he died; for it was customary with him, in the latter years of his life, not to evacuate any excrement under the interval of nineteen or twenty weeks, and sometimes (twice at least) he had no discharge for twenty-one or twenty-two weeks together. He lived to be near twenty-three years of age, and walked about almost to the hour of his death; for he was suddenly seized with very sick fits, but could not vomit; two or three of which fits carried him off in a few hours, and he died nine weeks after he had had any stool. The patient never vomited, nor had at any time any excrementitious taste in his mouth; neither did he sweat much, nor make more urine than in proportion to his drinking. When the patient went to stool, he evacuated several times in a day, and that for several days together, till he had emptied himself; and throughout his whole life he never discharged any other than thin excrements. Before the time of evacuation came about, he was of an extraordinary bigness, even several weeks before his going to stool, unless he could break wind, which he often endeavoured to do, by laying his body on the edges of a table or stool, but often to no purpose. He declined the use of any medicines for several years before he died, contenting himself with going to stool once

in three or four months, or in nineteen or twenty weeks, as above-mentioned. But what was surprizing, he generally had a pretty good appetite, and eat and drank as the rest of the family did; nay, till the time that his body came to be very full, he could work at the plough, or such like husbandry labour.

CASE XXV.

Of a Fracture and shortened Thigh-Bone.

IN the month of June 1743, a sailor fell from the main-top-mast-head, (where he was splicing some of the rigging) and broke his thigh-bone against the gunnel of the vessel.

The bone was forced through the wounds; the upper extremity of the fractured bone had made it's way externally through the muscle called the *vastus externus*, and the lower bone appeared through the teguments internally at least an inch and a half. A surgeon being sent for, and proper assistants provided, each wound was dilated near an inch, in order to facilitate the reduction; care being taken, whilst the extensions were making, to press the bones through the same parts of the lacerated muscles where they had made their passage; but this attempt failing, the parts were more opened, and the attempt repeated, but with as little success as before, nor could the bones be moved. A necessity now appeared of taking off part of the lower extremity of the thigh-bone; which being consented to, and the limb placed with an intervening body under the bone, an inch and a quarter of it's substance was cut off with the capital saw, and then the fracture was reduced. The wounds were washed with warm wine, and the parts cleansed from blood: they were then dressed with oil of turpentine made hot, pledgets of lint, spread with the usual ointments, and digestives, and

the whole limb covered with an oatmeal and strong beer poultice, made very warm. The bolsters, compresses, and bandage, were properly applied: after which about ten ounces of blood were taken from his arm, and an anodyne was ordered to be given in about two hours time.

The next day he had a fever, for which more blood was taken away, the limb swelled and lost it's natural heat; a gangrene threatened; for which flannels, squeezed from a fomentation of the plants, were applied, and the same dressings continued, with cordials and anodynes, till the fifth day, when a digestion came on, and his fever, for which he took a decoction of the bark, intermitted. About the 9th day it was discovered that a large abscess was formed on the outside of the limb, about an inch below the wound; which being laid open discharged near four ounces of matter: this was dilated up to the other wound where it ended. The bones were now in sight, and milder dressings were therefore applied, and the solid parts covered with lint moistened in alcohol, to keep them from absorbing the matter.

About the 16th day, the wounds discharged great quantities of foetid matter, and another abscess formed in the inside of the limb, which was opened, and the matter discharged. A probe could now be passed from this part to the wound on the same side, through which a flumula was drawn, in order to invite the matter to this depending part, and avoid the dangers of fouling the bones. In about four days that intention was answered, and the discharge decreased, the wounds having a good aspect.

At the end of the month the danger seemed to be over; the several abscesses, ulcerations on the shin, inflammations, erysipelatous swelling, with livid spots, and the whole train of ill appearances were surmounted. What now remained was to

correct

correct the shortness of the limb, and restore it to it's due length, that the recovery might not be attended with lameness. In order to which, a staple was ordered to be driven in the floor (on which the patient's bedding lay) the extensions were made by proper assistants, and some girth-web was fastened into the cloth fixed above the knee, which was fast to the staple at the foot of the bed. Some slips of strong sheeting were then passed within-side of the thigh outwards, close up to the groin, which were fastened to another staple behind the bed: this last contrivance was to counter-act and prevent the body from sliding on the fractured limb, as well as secure it in the position, and keep the body steady.

In this posture, or as near it as possible, the patient continued near two months; the dressings being altered as the symptoms required, and particular care being observed to keep the bones from growing foul by drying applications. The bones now began to scale or exfoliate, which continued near a fortnight, at the end of which the wounds healed daily, and at every dressing a fresh extension was made, and by degrees the limb was stretched out to the length of the other, with which it was compared, observing also the proper curvature. The single-headed circular roller had now it's place; and in this method he was treated till his wounds were near healing. At the end of eighteen weeks he sat up, craved for food, recovered his flesh and strength, and soon after took to his crutches.

At the expiration of thirty weeks he limped very little, was judged capable of doing his duty as a sailor, and was entered on board a vessel as an able man. In about five months he returned from North America in the same vessel, having worn the circular roller the whole voyage: his thigh was then examined, and a node was found, but scarce large enough to discover where the bones were separated.

CASE XXVI.

Of the Use of Mercurial Ointment in the Natural Small-Pox.

A Person who had the confluent small-pox in the natural way, was visited by a physician on the eighth day, who found him in a close, confined room, out of which the air was as much as possible excluded; and in spite of all his intreaties, he never could persuade the friends of the poor patient to take him out of bed, or to admit a more free access of air; so that the remedies to be applied had every obstacle to oppose. The face had acquired a cadaverous aspect; the small interstices betwixt some of the pustules were also pale; and the pustules, which had run into each other, were so flattened, that they were rather concave than convex. The pulse was 135, but distinct; the breathing was extremely laborious, and a total suffocation seemed approaching; the face, which had been swollen, was sunk; and the slight salivation, which had commenced the day before, was entirely suppressed; and every other evacuation in a degree. The urine was passed very sparingly, and the patient had not had any stool for a week, nor enjoyed any sleep for two days and nights: his feelings he could not relate, as he was incapable of speaking, and had not for twelve hours before asked for any thing, nor taken any nourishment; he was, indeed, a most dreadful object. The physician immediately ordered that small beer, porter, milk-pottage, and good wine-whey, should often be put to his mouth, that some little nourishment might, if possible, be swallowed. His medicines were one ounce of infusion of senna, to be taken every three hours, until it should have effect; and equal quantities of acid and anodyne mixtures, to be taken to the amount of an ounce mixed three times a day. Of the deobstruent powder,

powder, fifteen grains every night; and one scruple of strong mercurial ointment rubbed into his thighs morning and evening.

On the tenth day, he had enjoyed several hours of rest, and drank about a quart of different fluids; his face looked less cadaverous, and began to enlarge; and a slight salivation had come on again: he now spoke a little, though not very clearly; the pulse was slower and more full, and the breathing less laborious; but he had not yet had a stool; the urine was, however, greatly increased, and the symptoms in general less alarming.

A common clyster was now ordered to be administered; and half an ounce of the infusion of senna to be taken every three hours, until it should answer. The acid and anodyne mixtures to be repeated as before, and the mercurial ointment.

On the eleventh, the patient had had four or five dark-coloured, offensive stools; and the salivation was very copious, as well as the discharge of urine; the pulse was not lower, but in quickness only 120; the pustules were more full, and the interstices fresh or red-coloured; he slept pretty well, and took near a gallon a day of the above drinks; particularly, he was desirous of good small-beer; the breathing was very free, and the voice less faltering and distinct. This day the mixtures, deobstruent powder, and the use of the mercurial ointment, were continued as before.

On the twelfth, the salivation was amazingly copious; but the strength increased, and every symptom appeared more favourable; the pustules were turning upon the face, but the patient was again costive. The deobstruent powder was repeated as before; and a purging mixture, with the proportion of half an ounce of castor oil to every six ounces of the mixture, was directed to be taken in the quantity of half an ounce at a dose, every half hour, until it should operate.

On the thirteenth, stools had been procured; and this day the patient was taken out of bed for the first time: the pulse was only 100, and no fever attended; the salivation was surprizingly great, and the patient again saw day-light.

On the fifteenth, no fever was evident, but the salivation continued copious.

He now began to walk about the house, and complained of hunger; and from this time all medicines were discontinued, except the decoction of Peruvian bark and acid mixture.

His salivation continued for the space of a week; but as he attributed his recovery to that discharge, he underwent it with pleasure.

C A S E XXVII.

Of the Hydrophobia, occasioned by the Bite of a Mad Dog.

JAMES HORTON, of York, a very strong and well-proportioned young man, was bit by a mad dog in the right-hand: the wound healed of itself, and the accident was forgotten. In about five or six weeks, he complained of pain all over his bones, but especially his back, and round about his stomach; he looked very pale and hollow-eyed. The third day after this complaint, he called for brandy, drank it, went to bed, and vomited it up: after this he had a restless night; and in the morning found himself very ill, with a strong rising in his stomach; and though no thirst, yet an inability of drinking, and even of swallowing his spittle, which he frequently repeated was death to him. Disacordium, and a bottle of cordial water, were brought; he took the former, but was not able to drink one spoonful of the cordial: his pulse was very slow, and sometimes unequal; his flesh cold, his tongue flexible and moist, and a little white. He complained very much of being sick at his stomach; and, upon offering him a cordial, he

He would start and tremble at the approach of it, as he also did at giving him water to drink. Attempting to put the latter to his mouth, he seemed more affrighted, would draw back his head, sigh, and throw a very ghastly look upon it, accompanied with a shrieking noise, from whence it appeared that his disorder was an hydrophobia, or dread of water: upon which a vein was ordered to be opened in the bitten arm, the wound to be scarified and drawn with blister plaisters, and the same plaisters to be applied to the neck, legs, and inside of the arms. The usual antidotes were prescribed in bolusses; for he could take solid things in a spoon, yet not without much trembling, fear and caution, and an earnest request that nobody would suddenly offer them to him, but give them gently into his hand; and then he would steal them softly to his mouth, and greedily swallow them like a dog. Drink was likewise offered him, but he could not see it without horror, and felt the same repugnance to it in his stomach. His blood was well-coloured, in such proportion as is usual in healthful persons, and of a good consistence. The patient was persuaded, with much difficulty, to throw himself upon his belly across the bed, with his head hanging over the other side: in this posture of a dog, he suffered a large bowl, filled with small-beer, to be brought under his head; and embracing it with rapture, he declared he was infinitely refreshed with the smell of it. He endeavoured, with great earnestness, to put down his head to it, but could not, his stomach rising as often as he opened his lips. At length, he put out his tongue, and made towards it as though he would lap; but when his tongue ever so little touched the surface of the beer, he started back affrighted, and yet all the while he was pleased with the thoughts of drinking, and would not suffer it to be taken away from under his head; and if it was a little withdrawn, he would follow the smell of it with delight, and snuff at it with his nos-

trils. At length, he suggested that the faint smell of the small-beer hindered him from drinking, and a bowl of ale was brought him; but after much striving, and exerting his tongue a thousand times, he could not drink of it; and lapping with great terror, as often as his tongue touched it, he started back with his head, bringing it down again gently to the bowl a hundred times, but all in vain. He had then a quill given him, consisting of two or three joints, the one end in his mouth, the other in the liquor; but he could not manage it, nor suck any more than a dog: after this, he was prevailed on to lie down, and in a little time he fell into convulsions, bit, snarled, caught at every body, and foamed at the mouth. After this fit was over, he took helebore in a bolus; it operated about three or four times very plentifully, and he declared himself wonderfully at ease; but yet now and then he would fall into convulsions, and then he was always insensible. Some time after he was again solicited to drink, and he now readily enough put himself into the former posture, and with as much earnestness as ever used all the little shifts to drink while the bowl was under his head, but equally in vain. A small silver tumbler full of drink was put into his hand, which when he had stolen near his mouth, he would have thrown the contents into his throat, but it struck against his teeth and fell into the cup again. For forty-eight hours after this, he neither had a stool, or made water; and therefore a clyster was given him; but he did not retain it, and soon after he died convulsed.

C A S E XXVIII.

Of a Person who died paralytic from a Bite of a mad Fox.

A Person at Norwich had been bitten by a mad fox in the right-hand: in six weeks after, he began to be affected with shifting or wandering pains, which still in-

creased, especially in his right-hand, arm, shoulder, and back, but not so violently as to compel him to take to his bed. He was advised to take a dose of the common purging spirit of scurvy-grass, which gave him seven or eight stools, and made him very faint and weak; and his right-hand began to be paralytic, though his pain was much abated there, and wherever else it had been greatest. He had bled freely at the wounds which the fox had inflicted, and they healed without farther trouble, only at intervals he felt a little twinging pain in that hand and arm: though the dread of water had not yet appeared, his heat was much increased, and his pulse intermitted every fifth or sixth stroke on the right side only. He also looked ghastly and thin, but his eyes were sparkling and fiery. The most temperate antispasmodic and antiparalytic remedies were directed to be mixed with the specifics commonly used in an hydrophobia. The next morning, he complained of a restless night; that he had wholly lost the use of his right-hand; and that though the pain was more abated, he was very hot and uneasy. His pulse was then much stronger than over night, but intermitting on the right side only as before. His countenance was somewhat more ghastly, yet his veins were very full, as in the beginning and increase of a fever; no hydrophobia appearing, six or seven ounces of blood were directed to be drawn from the left arm, and what had been formerly prescribed to be repeated. He bled eight ounces very freely; the blood was well-coloured, but very thick. The same day, in the afternoon, the grand symptom appeared; his heat was very great, and his pulse very high and intermitting in both wrists; and if any thing was offered him to drink, either standing or sitting, he started as if his head would have fallen backwards off his shoulders; but when laid upon his pillow, he could, though with great difficulty and uneasiness, at times get down a spoonful. He then looked

more thin and ghastly than before; and seemed afraid of every body that came suddenly near him, telling them they stifled him, or stopped or hindered his breath, in coming so suddenly upon him. His intellects were all along unaffected; his voice was broken and imperfect, as of those persons whose tongue, and other organs of speech, are turning paralytic. On the third evening, though all the symptoms were growing worse, yet he could walk out of one room into another with very little help; but between twelve and one the next morning, he died, without any convulsive motions, sighs, or groans, as if in a moment there had been an universal palsy.

CASE XXIX.

Of extraordinary Bleedings in an Infant.

A Child, about a quarter of a year old, at Littlehal, in Shropshire, was taken with a bleeding at the nose and ears, and in the hinder part of the head, which lasted for three days; and afterwards the nose and ears ceased bleeding, but still blood, like sweat, came from the head. Three days before the death of the child, which happened the sixth day after it began to bleed, the blood came more violently from it's head, and streamed out to some distance: it also bled on the shoulders, and at the waist, in such quantities that it might be wrung out of it's linen. For three days also it bled at the toes, at the bendings of it's arms, at the joints of the fingers, and at the fingers ends; and in such quantities, that in a quarter of an hour the mother had caught, from the droppings of the fingers, almost as much as the hollow of her hand could hold. All the time of this bleeding, the child cried not much, but only groaned, though, about three weeks before, it had such a violent fit of crying as was uncommon. After the child was dead, there appeared in the places where the blood issued, small holes, like the pricks of a needle.

CASE

CASE XXX.

Of a cancerous Ulcer in the Lip, cured by Hemlock.

JANE EGBIN, aged 56, was afflicted with an ulcer of the under lip, of a cancerous appearance: it had continued obstinate against a variety of applications for the space of several years; and though at the commencement of the complaint, about ten years before, it was troublesome only from a hardness and dryness just perceptible in the lip, with slight shooting pains in the neighbouring parts; it became at length very much enlarged, and spread into an ulceration, which occupied the whole lip, extending internally as far as the gums, discharging a thin, foetid humour, exciting violent darting pains about the face, and rendering the habit of the patient much emaciated.

Ten grains of the hemlock, in powder, were ordered to be taken three times a day; and, in the space of a week, the addition of a few dishes of hemlock-tea, first to be made weak, and gradually to be increased in strength. The ulcer was dressed with the following cerate twice a day; and previous to the fresh dressing, the part was fomented with a decoction of hemlock, to wash off any remains of the former dressing, which, by a long continuance, might acquire a pernicious rancidity.

Take fresh oil of almonds and powdered hemlock, of each two drams—of the yellow cerate, one dram. Mix, and make a cerate.

This plan, strictly pursued for the space of a month, greatly mitigated the pains, changed the thin discharge into well-digested matter, and gave the edges of the ulcer a disposition to heal.

It having been observed that this, as well as every other powerful remedy, becomes less efficacious by constant repetition, the

patient was advised to omit the hemlock for a week or ten days, and then to pursue it as before; and by this procedure the ulcer, at the end of three months, entirely healed, and no relapse ensued.

CASE XXXI.

Of a Stone cut from under the Tongue.

THE patient from whom this stone was cut, had, about eight years before, been taken with a great cold in a winter voyage; after which, he felt a hard lump in the place whence the stone was cut out; and ever afterwards, when he took cold, he felt great pain in that part; but after the cold was over, that part was no more painful than the rest of his mouth. In the seventh and eighth year, it often caused sudden swellings in all the glands about the mouth and throat, upon the first draught of beer at meals, which would fall again in a little time; at last, it caused sudden vertigos, which continued from spring to August, when the part swelled at once and discharged digested matter, which suddenly stopped by cold, and the throat swelled with a great inflammation; it also threatened suffocation, accompanied with incredible pain, when he ventured to swallow even beer, or any liquid thing; and thus he continued for five days, in which time he had as great a flux of spittle as if he had taken some mercurial medicine: the first day the saliva ran thin and transparent, almost like water, and without any bubbles; the second day it ran frothy, and tasted salt, which yet the patient thought rather hot than really salt, because then the inflammation was at the height; the third day it was exceeding ropy, and a small pin-hole broke directly over the place of the stone, and discharged digested matter as formerly; the fourth day, the saliva ran insipid, sensibly cold in the mouth, and a little frothy; the fifth day, which was the day of the incision, it ran as on the

the fourth, leaving an extreme clamminess on the teeth, insomuch that they often stuck together as if glued.

Upon the incision, which proved not wide enough, the membranes or bags, wherein the stone lay, came first away. The stone itself was so hard as to endure the forceps in drawing it out; it was covered over with a grassy green matter, which soon dried and left the stone of a whitish colour; it was light in proportion to it's bulk, weighing about 7 grains and much of the shape of an ordinary horse-bean.

C A S E XXXII.

Of the Hooping-Cough.

A Boy, aged five years, had been attacked with a cough at the beginning of February 1774, which, after a week or ten days continuance, was accompanied with hooping; this gradually increased in violence and frequency, till the paroxysms returned at least every quarter of an hour, day and night: early in the disease, a bleeding at the nose, and a slight expectoration of blood, frequently succeeded the hooping and strong efforts in coughing; he was on these accounts bled in the arm, with some little mitigation of the complaints. On the 26th of February he was very feverish, his pulse was as quick as 148 in a minute, his breathing was confined and short, he had a bloated face, and an emaciated body: he had taken emetics and purgatives; but every evacuation seemed to aggravate the disease, in proportion as it weakened the body.

The following was ordered.

Take of decoction of Peruvian bark six ounces—of the pægoric elixir three drams—of tincture of cantharides one dram. Mix and give a spoonful and a half three times a day.

On the 26th, he took two doses of this

mixture, and no bleeding at the nose or expectoration of blood had since ensued: on the 27th he hooped less frequently than he had done for several preceding days, and appeared much more cheartul; but he refused to take any medicine, except a preparation with squills, which the father administered; this purged the child considerably, and the complaints again returned with nearly their former violence.

From the 27th of February to the 2d of March, the child had regularly taken the bark mixture; at nights he slept better, and the hooping-cough had nearly subsided: on the first of March, it did not attack him at all; and on the 2d, it only occurred once. The body was regular, and the countenance more natural; but the pulse was still very quick, and the fever violent: no strangury had yet been complained of.

On the 4th of March, the child was taken into the air, and seemed to be gradually recovering.

On the 6th of March, the hooping had not returned since the second; some cough continued, but with less violence; the countenance was more natural, and the appetite better. The mixture was continued, and eight grains of rhubarb taken at bed time: and by the 10th, he was quite recovered.

C A S E XXXIII.

Of a Periodical Evacuation of Blood at the End of a Finger.

WALTER WALSH, a temperate man, of a sanguine complexion and good disposition, was, in the 43d year of his age, seized with a great pain all over his right-arm, an excessive heat and redness in his right-hand, and a pricking in the point of his fore-finger, on which there appeared a little speck, as if a small thorn had run into it; and supposing it such, he opened it; upon which the blood spun out in a violent but small stream: after spending

ing it's violence, it would cease for a while, and only drop, and then spring out with violence again, continuing thus for 24 hours, till at last he fainted away, when the blood stopped of itself, and his pain left him. From that time ever after, he was frequently troubled with the like fits, seldom having a respite of two months for twelve years, and they never returned oftener than in three weeks. He rarely bled less than a quart at a time; the oftener the fits returned, the less he bled; and the more rarely they occurred, the more he bled. Whenever the blood was attempted to be stanch'd, he felt exquisite tortures in his arm; no remedies proved effectual; he was afflicted with no other distemper; neither season of the year nor weather affected him. This bleeding was owing to no external accident; only if he drank more than ordinary, he was apt to bleed. These frequent fits brought him at last very low, inasmuch that, towards his latter end, he bled but little, and that too like diluted water. He died at last of this distemper.

C A S E XXXIV.

External Application of the Bark.

A Child about four years old, of a healthy constitution, had for some time laboured under a fever, attended with so violent a cough, that more danger was apprehended from thence than from his fever. However, the fever having abated, and, in consequence of the remission, the cough becoming less troublesome, the bark was ordered; but not being able to get down more than one dose, and the cough, together with the fever, having returned with as much violence as ever, it was thought a favourable opportunity to try the efficacy of an external application of the bark. Accordingly, a piece of holland was directed to be cut out in the form of a waistcoat, (without sleeves) and for the lining, a kind of callico of an open tex-

ture, known to the ladies by the name of callico wrapper. Between these cloths were quilted four ounces of bark, grossly powdered. As soon as this last fit of the fever and the cough was considerably abated, the waistcoat was put on the child's naked body. The next day there was not the least return of any symptom of the fever; the cough was gone, and the child had no complaint to make, except some uneasiness from the gross particles of the bark. Another waistcoat was therefore ordered to be made, with the powder as fine as if for internal use. This the child wore for a week, when it was renewed, and wore again for seven days more. From the first application of the medicine in this manner, without any other remedy, the patient was recovered to perfect health.

C A S E XXXV.

Of the external Application of the Bark in an Ague.

A Boy, seven years and five months old, was seized with a regular tertian ague, every attack of which was preceded by an extreme cold fit, of about three hours continuance; and was succeeded by a burning heat, which lasted an hour or two, at which time it went off with a profuse sweat. When he had been ill about a month, upon taking the bark, salt of wormwood, and snake-root, his complaints disappeared for about three weeks, when his fever returned in the same manner as before, viz. every other day. But after a while the fever changed it's type, and became a regular quartan. The several paroxysms of this disease were more violent than those of the tertian, as the heat was always more intense, the sweats more profuse, and attended with violent pains in the limbs. With respect to stools, his body was in very good order throughout the whole course of the disease; but his urine, when the fever was upon him, was as high-

coloured as if it had been tinged with blood.

On Thursday February the 22d, the fit was very violent, and a physician was consulted.

On Friday the 23d, a waistcoat, in which were quilted seven ounces of the bark, was, in the absence of the fever, put upon the child.

On Sunday the 25th, the fever returned, but continued only an hour and a half, or two hours, with very little thirst; whereas it used to continue for eight or nine hours.

On Wednesday the 28th, he was as well as ever he had been in his whole life.

On the 1st of March, the waistcoat was renewed, and without the return of any one bad symptom, he continued perfectly well.

C A S E XXXVI.

Of a Man who lived eighteen Years on Water.

A Young man in Scotland, aged eighteen years, over-heated himself on the mountains in pursuit of cattle, and in that condition drank excessively of cold water from a rivulet, near which he fell asleep, and awaked about twenty-four hours after in a high fever. During the paroxysm of the fever, and ever after that time, his stomach loathed and could retain no kind of aliment, except water or clarified whey; which last he used but seldom, there being no such thing to be had, by persons of his condition in that country, for many months in the year. At the time this account was penned, he was about thirty-six years of age, of a middle stature, a fair and fresh complexion, with a healthy, (though not seemingly robust) fresh countenance; his habit of body was meagre, but in no remarkable degree; his ordinary employ was looking after cattle, by which means he needs must travel four or five miles a day in that mountainous country.

A gentleman, to whom this man's father was tenant, carried him to his own house, and locked him up in a chamber for twenty days, and supplied him with fresh water, to no greater quantity in a day than an ordinary man would use for common drink; and, at the same time, took particular care that it should not be possible for his guest to supply himself with any other kind of food without his knowledge; yet, after that space of time, he found no alteration in his vigour or visage. He used no tobacco, yet seemed to discharge as much saliva as others who do not use any stimulus to provoke that evacuation.

If a judgment might be formed of his insensible perspiration by the softness and freshness of his skin, he was in that respect like other men; and, like them, he sweated at violent exercise. As to the grosser excrements, no enquiries were made about them; but it was concluded that he discharged none, because the country people, who strongly fancied him supported by supernatural means, would not have forgot to object this to him, if he had evacuated any quantity of gross fæces, with which water is not charged.

C A S E XXXVII.

Of a dislocated Thigh-Bone.

ON Wednesday, the 22d of September 1756, a very robust, healthy man, of about 34 years of age, compleatly dislocated his right thigh. The account given of the manner in which it happened was, that being employed in carrying corn from the field in harvest, and observing the waggon, from the unevenness of the ground, ready to be overturned, he rashly attempted to prevent it, by placing his right shoulder under the side of it, to support the weight; but being overpowered, both the waggon and corn fell upon him. He was taken up insensible, and almost smothered, and carried

ried to the nearest village, where a surgeon came to him about two hours after the accident. He had then recovered his senses, and complained of a violent pain in his right groin, just below which was a round hard tumour, which was plainly perceived to be the head of the thigh-bone; this, by it's pressure on the crural nerve, occasioned likewise a numbness downwards, in the parts supplied with branches from that nerve. On the outside from the knee upwards, the bone could not be felt higher than the middle of the thigh; from thence it sunk in the muscles and left a hollowness, which increased gradually to the place distinguished in the sound state by it's particular prominence: there the cavity was large enough to contain a man's fist. The limb was evidently about two inches longer than the other, but straddled outwards and forwards, so as that it could neither be brought near the other knee, nor into the direction of the trunk; it admitted, however, of being raised up towards his body, but not without increasing his pain. The knee and great toe were turned outwards, but not so much as, from some descriptions of such cases, might have been expected. The bedstead on which he then lay was made of thick oak-planks, so firmly fixed as to resist any force that could be used in making a proper extension. The patient was therefore placed across the bed on his back, with his left heel against the frame of the bedstead; where, as it was made to rise higher than the bedding, in the manner of a bed-board, he had sufficient foot-hold. The patient's father lay across the bed on his son's left side, with his feet fixed against the bed-side; and, by holding him firmly down, assisted greatly in counteracting the extension, which was made by three men, with a towel fixed above the knee, upon a napkin folded and rolled on, to prevent the skin from being chafed. His right-knee was bent, so as that the leg made about a right angle with the thigh; and an

assistant was placed on his knees upon the floor, holding the ankle, with directions, on a certain signal, to push the leg outwards; by which, as with a lever, the head of the thigh-bone would be twisted inwards and downwards. The surgeon placed himself on the patient's right side, at the bed-foot, with the palm of his left-hand on the head of the dislocated bone, and his right near the knee-pan. The extension being made gradually and steadily by the men who held the towel, until it was thought the bone might be moved, the signal was given to the assistant who held the ankle, which he punctually obeyed; at the same instant, with a smart jerk, the surgeon pushed the head of the bone downwards and outwards, and the knee-pan inwards; and immediately the bone rushed into it's proper place, with a snap that was perceived by all present. The patient was instantly relieved, and cried out, 'Thank God, I am well!' As the limb had then recovered it's perfect motion, it was with some difficulty he was prevailed on to continue in bed: finding, however, that he had received a bruise on his left ankle, at the time of the accident, which had before been overlooked, but now began to be painful, he consented to remain in bed. There was no appearance of any bruise upon the hip, nor any considerable inflammatory swelling after the reduction: the only application used for a few days, was a large double compress of linen, wet in verjuice, and moistened with the same as often as it became dry. After directing the common precautions for preventing an inflammation and fever, the surgeon left him. On the Friday following, he saw him again, and found him free from fever; his right thigh and leg perfectly easy, but his left ankle a little swelled and painful. Being uneasy at his confinement, he was very importunate for leave to get up; but was again dissuaded, the surgeon explaining to him the absolute necessity there was for his continuing in bed until the injured parts

parts had recovered their due tones. It was even necessary to tell him, that there was danger of throwing it out again, if he should attempt to walk before the end of a fortnight. But, notwithstanding this, on the Monday after, he got out of bed, and walked into the yard without any assistance; declaring, if his left ankle had not been hurt, he believed that he should have been as well able to walk and work as ever. At the end of the fortnight, he returned to his usual labour, and worked from five in the morning until seven in the evening daily, without any inconvenience from his hip, which was not, on any occasion after, painful; neither did he find the least difference between that limb and the other, in length, strength, or flexibility.

CASE XXXVIII.

Of an extraordinary Hemorrhage.

IN the month of January, a gardener, about the age of 24, at Wisbech, in the Isle of Ely, Cambridgeshire, happened to receive a slight puncture from a rusty nail in the sole of his right foot; and, notwithstanding no tendon or blood-vessel was wounded, except some small branches of veins, the whole foot was immediately swelled to a very unusual degree, without any fever or other apparent cause for it. It was also attended with great pain, and an extraordinary pulsation upon the part, as in the wounds of arteries; and so distended, as if the blood would burst out of it's vessels. Accordingly, after two days, upon making an opening, in order to enlarge the wound, there rushed out immediately such an obstinate flux of blood, as would not yield to any styptic means longer than the bandage was holden on by some strong hand. And although, by this incision, no vessels were wounded but the capillary veins, yet this hæmorrhage continued to shew itself as violent as at first, for six days successively, whenever the necessary means were relaxed.

Upon which, for the sake of revulsion, the patient had a vein opened in the arm of the opposite side; and it had such a sudden and surprizing effect, that the flux of blood in the foot instantly ceased, and the wound healed very soon without any farther trouble: but the flux of blood, consequent upon bleeding, became equally as difficult to restrain as that in the foot, for the space of four days; all which time it would have continued to flow most violently, but for the strictest bandage, and the same application of the hand as before. After this the patient continued well till March following, when he had a violent hæmorrhage for three days from the nose, preceded by a drowsiness. From thence he continued well till October, when he bled again at the nose, as before, for seven days. In the middle of March following, the hæmorrhage began to come away from him in stools for seven days together. Notwithstanding the use of medicines, and in the succeeding October, these bloody stools returned again, and continued seven days without gripings. The like returns were observed in the springs and falls of the four years ensuing: at the end of which time this habitual hæmorrhage left the intestines, and broke through the kidneys for seven days at the usual seasons. But, in the December of the fourth year, he had the distinct small-pox; which made such a change, that he had none of this periodical hæmorrhage, nor any evacuation equivalent, for the two seasons of the next year; till, in the December then following, it returned by the urinary passages for three days only. Again, in the month of May, the next year, it returned, and continued by urine for seven days, only the three first days the urine appeared but of a coffee-colour. After this, he continued well the following autumn and winter season. But in the ensuing March, being nine years after the first accident, he got a wound in his leg, which proved like the puncture in his foot, and

and soon after this, falling into violent convulsions for four or five days, he died, in a manner, as if suffocated by too great a redundancy of blood.

C A S E XXXIX.

Of an Emphysema, or Inflation of the Skin, occasioned by the Lungs being wounded.

A Young man, of a small and slender form of body, was thrown from a horse, and thereby received a considerable hurt in his side, about two o'clock in the afternoon of July the 13th. A surgeon being called to his assistance, found him complaining very much of a pain in his left side, which occasioned a difficulty of breathing, and on that account he immediately bled him. Then he examined his side, and found so remarkable a swelling under the skin, that he could not trace, nor even feel the ribs. At first he supposed it an effusion of blood in the cellular membrane; but staying with the patient some little time, he observed that the tumour extended itself very fast; and then examining it with more attention, he perceived a crackling noise of air under the skin when the part was pressed with the fingers. The quick progress of the swelling, and this flatulent feel in the part, made him think that it was emphysematous, and that it was occasioned by a broken rib, which had pierced the pleura, and wounded the lungs. Accordingly he discovered more or less of air under the skin, almost over the whole trunk: but the puffy swelling was most considerable about the place where the patient complained of pain, and where he supposed the rib or ribs were broken. The difficulty of breathing increased in proportion as the swelling spread itself over the body, and as the skin became more elevated and tight. He therefore applied to the part thick compresses, dipped in vinegar, and secured them by a pretty tight bandage,

in hopes of stopping the progress of the disease.

At ten o'clock at night he bled him a second time, and left him for that night. Early the next morning he visited him again, accompanied by another surgeon, and found him so extremely blown up with the air all over his body, that his skin was like a drum; and his breathing was become so laborious, that he was apprehended to be in great danger.

About seven in the evening, a physician was called in, who found the patient in bed, panting for breath. His form was that of a human skin stuffed. The inflation was great and universal, except in his hands and feet, where it was very inconsiderable. The skin was every where shining, as it is when much extended by any kind of swelling; and in most places was raised one, or two, or perhaps three inches, from the subjacent muscles or bone. The air could easily be pressed out from any part, but it immediately returned upon taking off the hand. When struck, his body sounded like a wet drum; and when pressed, the air could be felt, and it's sound distinctly heard. The cellular membrane was less inflated, and the skin less distended upon his extremities, in proportion nearly to the distance of the part from his chest. Those parts on the surface of the body which have a more loose and yielding cellular membrane, were proportionably more swelled: thence his eye-lids were so fixed by their own bulk, that he had not been able to see light from a few hours after the accident happened; and the penis and scrotum were as much distended as they are usually in the worst dropsy of those parts.

His breathing was very laborious, (and rather frequent) in the following manner. His inspiration was so short, as to be almost instantaneous, and ended with that catch in the throat which is produced by shutting the valves. After this he strained

to expire for a moment without any noise; then suddenly opening the valve, he forced out his breath with a sort of inward groan, and in a hurry, and then quickly inspired again; so that his endeavour seemed to be to keep his lungs always full. Inspiration succeeded expiration as fast as possible. From the small quantity of air that was inspired and expired at a time, it was plain, that he either had not room for a greater quantity, or could not bear a greater expansion of the chest. He could not suffer himself to be turned on his right side, but could bear to be supported in a sitting posture. He said the difficulty of his breathing was owing to an oppression, or tightness across his breast, near the pit of the stomach. He had likewise from the beginning a little cough, which exasperated his pain, and brought up blood and phlegm from his lungs.

To discover, if possible, whether the cellular membrane was inflated among the more internal parts, as well as under the skin, his mouth and the extremity of the gut were examined, all the loose membrane between the tongue and gums was inflated; but no such symptom could be felt within the fundament. His left side was also examined very carefully, but no discovery could be made of any broken rib, nor any thing that indicated the place where the pleura was wounded. The skin was indeed somewhat discoloured near the extremities of the two last ribs; and upon moving the blade-bone of the shoulder, there was such a particular noise, as gave reason to suspect that the broken rib lay under that bone. It was then proposed to open the skin below the blade-bone, to give immediate relief, which was approved of; and the patient was very desirous that any thing might be done which the medical attendants thought might be of service to him.

Accordingly one of the surgeons made an incision an inch in length. The air rush-

ed out with noise, as from the mouth of a pair of bellows; and the blast continued to be audible for some time, becoming gradually weaker and weaker. The skin all round towards the wound was then repeatedly stroked, and at each time discharged a considerable blast of air. To make this process more easy, the patient's skin was oiled and the stroking then continued, and in a short space of time his bulk was very much diminished. He was sensible of great relief from this: from the most desponding state, his spirits were immediately raised; and the physician being somewhat fatigued with stooping, and having left off, the patient fell to work himself, and stroked his body upwards and downwards towards the wound with great eagerness.

It was then proposed to give him his sight; and the physician, with his fingers, squeezed the air from his right eye-lids towards his temple, and then bid him look up. He opened that eye, saw, and was wonderfully pleased; but presently the eye-lids filled again, and were closed. From this time, while the physician and surgeons remained with him, he continued from time to time to press the air from his eyes, and looked at them when he spoke.

In order to empty the head, neck, and opposite side, the sooner, one of the surgeons made another small incision in the skin, upon the right pectoral muscle, from which a good deal of air was soon pressed out. He then desired that the air from the penis and scrotum might be discharged; saying, that the bulk of those parts frightened him. A puncture was accordingly made in the scrotum, and at the first blast the part lost two thirds of its bulk.

The several medical assistants now agreed that he should be well emptied by stroaking, and then that a thick compress, wet with spirits and vinegar, should be applied to all the affected side, and bound

as tight as he could bear it, and that he should lie on that side. This was ordered with a view of preventing as much as possible more air getting into the cellular membrane, but this was not done that night, in which, however, he got rest; but in the morning his difficulty of breathing had increased a little, for which he had been bled pretty freely. The wounds were kept open all night, and his friends, from time to time, had pressed out some air; and in the morning the compresses and flannel roller were applied. The emphysema had, however, subsided greatly, in the mean time. His eyes were now quite open. Upon stroking round his wounds, they still emitted air, but less freely than before; both on account of the inflammation which was begun upon them, and because there was little air remaining in the cellular membrane. The patient breathed likewise with much more ease; so that it was concluded he was out of all immediate danger, and that the remaining emphysema would go off gradually by the air's being destroyed, or absorbed. It was therefore agreed that his case was now to be considered as a broken rib, with wounded lungs; and that in the future treatment inflammation and suppuration in the chest were to be guarded against.

His difficulty of breathing and cough (with which from time to time he brought up some blood and viscid phlegm) continued to be so very troublesome, that he was bled three times more in the course of a week after this. He took nitre and pectoral emulsions, then asses milk, and went into the country. The emphysema was quite gone in a few days, and in about two months he was in all respects well.

CASE XL.

Of a Gangrene stopped by the Bark.

A Man, about 35 years of age, of a melancholic, scorbutic habit, drawing a

charge of powder out of a fowling-piece, and unwarily clapping the palm of his right-hand on the muzzle, the piece happened to go off; he received a wound through the middle of his palm, extending wide and deep between the thumb and fore-finger, whereby the vessels and tendons were lacerated. The hæmorrhage was immediately stopped, and his hand dressed. For some days the patient had a grievous pain, with a large swelling and inflammation in all his fingers, except the thumb, and all over his hand and arm; and the wound discharged only a large quantity of thin matter, at first of a bloody, and afterwards of a dusky colour, and somewhat foetid: the wound itself was also of a blackish colour, spread farther every day, and the swelling, inflammation, and pain, were scarce diminished, though recourse was had to the usual remedies in such cases. But on the eleventh day from the accident there flowed spontaneously, at four several times in the space of twenty-four hours, some ounces of blood, which likewise twice stopped spontaneously, and was twice staunched by applying spirit of turpentine, and compressing the hand. And now the lips of the wound plainly appeared mortified; and the actual cautery seemed to be the last resort, both for stopping the hæmorrhage and the progress of the mortification, since the one baffled fomentations and cataplasms, and the other bandages. But if the cautery should not succeed, recourse must be had to amputation; and how doubtful a remedy even this is in bodies of such a habit, is sufficiently evident from experience. In order to avoid both, he was advised to try the bark, of the efficacy of which he had then heard a great deal. On the twelfth day, therefore, two scruples of the bark were given in the morning, and repeated every four hours. The next morning, after the patient had taken half an ounce of it, the pain was very much abated,

abated, the swelling of the hand fallen, and a little matter observed about the lips of the wound, within the bandage; and the edges, which the day before were black with the mortification, now seemed to begin to separate. The fever likewise, which at first was no ways violent, yet pretty sensible when the hæmorrhage increased, now entirely ceased, the urine depositing a little sediment of a dirty or whitish yellow. The use of the bark was continued in the same manner for two days; and afterwards, for two days more, it was taken thrice a day; and for three days more, only twice a day; so that there were two ounces of it given in one week. In the mean time, the swelling and inflammation vanished, digested matter flowed from the wound, the flesh grew up underneath; and the pain, which yet continued pretty sharp in the part when the patient moved it, was much abated. For three weeks after, he was very well, only that he had rheumatic pains (with which he was usually troubled in winter) sometimes in his foot, and sometimes in the shoulder, and one or both shoulder-blades, accompanied with a swelling; he was free of a fever, and had an appetite for proper food. But afterwards, on the 19th of December, his appetite became weaker; the pain in the bones of the hand, together with the swelling, increased; which seeming to heighten the day following, the pulse became somewhat quicker on the third day, and the swelling of the hand, together with an inflammation, threatened an abscess, while there flowed a white matter from the wound, and in the same quantity as before. But, on the fourth day, the lips of the wound swelled with vesicles, tended to a gangrene, with a plentiful discharge of thin humour without any matter; and the hand was enflamed, and in much pain. The bark was therefore given in the same manner as before; and within the space of eight hours, the patient having scarce taken three doses,

the pain, which before was very sharp, was eased as by a charm; and at the next dressing, the swelling of the hand seemed to be abated one half, and a good digested matter was discharged from the wound. The urine, which on this return was at first of a pretty deep colour, became gradually lighter, with little or no sediment. After this, to prevent a relapse, he took two scruples of the bark twice every day, for three days; and after that, half an ounce of the bark every week, for six weeks; and at length, after four months, this tedious cure was completed.

CASE XLI.

Of the Use of Blisters in Palsies of the lower Extremities, and Incontinence of Urine.

GEORGE WOOD, a taylor, aged 32, was admitted into the London Hospital on the 5th of July, and gave the following account. That near two years before, after over-heating himself by exercise and drinking cold water to cool him, (which he had done very frequently) he was seized with a violent pain in his head, and in the small of his back, which continued about eight days; when a very great rash broke out all over him, and the pains went off. In order to be cured of the rash, he applied about a month afterwards to a famous empiric, who gave him four pills, of which he took one each morning. The pills vomited and purged him excessively; nevertheless, he applied to him again in a week's time, and got four more, to be taken in the same manner. He took two of these, the last of which operated with such violence, that his friends thought it would have killed him, and therefore he took no more of them. Soon after his rash disappeared, but the vomiting, caused by the pills, continued very frequent for three months, attended with great costiveness. His limbs became very weak, so that he could hardly walk, and this weakness gradually

dually increased, till he lost entirely the use, together with the sense of feeling in them: they were also very much wasted. This palsy happened about a year before his admission into the hospital; at which time he was seized with a suppression of urine, which (in spite of every thing he took to remove it) lasted four days, attended with great distension of his belly, and excessive pain. At the end of these four days, his urine came away involuntarily, and ever since had been continually dribbling from him. His costiveness became so obstinate, that he never went to stool without taking some purging medicine. He was generally eight, ten, or twelve, and once fifteen days, without one.

He was at first ordered to take two ounces of *tinctura sacra* immediately, and a spoonful every night and morning, or occasionally, to keep his body open; and half a dram of bark, with the same quantity of valerian, to be taken three times a day. Four days afterwards, (these medicines producing no alteration, excepting that he had some stools by means of the *tinctura sacra*) a large blister was directed to be applied to the region of the *os sacrum*, at the lower extremity of the backbone; the effect of which was so great, that in less than twenty-four hours he could retain his water above an hour at a time; and in a week he could retain it for two hours. The incontinence of urine gradually diminishing, he was able, on the 27th of August, to retain it for five hours at a time, and was soon perfectly free from it.

The effect of the blister too was so remarkable upon his paralytic limbs, that he got warmth and feeling in them the next morning after it was applied; but complained much that his legs were frequently drawn up, and that he could not keep them still, whatever efforts he used

for this purpose. This motion in his limbs, however irregular or involuntary, was a favourable symptom; but the spasms continuing to be troublesome, though not so frequent, another blister was applied; upon which they soon ceased, and his paralytic symptoms were considerably abated, though, at the time this case was drawn up, they were not perfectly removed.

CASE XLII.

Of a Fork put up the Fundament, and extracted through the Buttock.

AN apprentice to a ship-carpenter in Great Yarmouth, about 19 years of age, had violent pains in the lower parts of his belly for six or seven months; it did not appear to be any species of the colic, but he sometimes made bloody urine, which induced an apothecary and surgeon, to whom he applied, to believe it might be a stone in the bladder. The patient was very little relieved by physic; at length a hard tumour appeared in the left buttock, two or three inches from the verge of the fundament, sloping a little upwards. A short time after, he voided digested matter by the fundament, and that every day for some time. The tumour at length broke, and the surgeon suspected a fistula, but could not introduce the probe by the orifice of the fore into the strait gut. Shortly after, the prongs of a fork appeared through the orifice of the fore, upwards of half an inch beyond the skin, upon which the patient's violent pains ceased. The surgeon divided the flesh between the prongs, and after that made a circular incision about the prongs, and so with a strong pair of pincers extracted the fork, handle and all, entire, but not without great difficulty. The end of the handle was besmeared with the excrements; the fork was six inches and a half long, the handle ivory, but tinged with a very dark brown

brown colour; the iron part was very black and smooth, but not rusty. The patient recovered in a short time.

The patient told a relation of his how this came about; viz. that being costive, he put the fork up his fundament, thinking by that means to relieve himself; but unfortunately it slipped up so far, that he could not recover it again; and he added, he had no trouble or pain till a month or more after it was put up.

CASE XLIII.

Of a singular Colic.

A Man of forty years of age, of a bilious and scorbutic habit, for a long time greatly laboured under colic pains, especially in the lower region of the belly, besides continual and troublesome flatulencies. About two or three years before his death, he had bilious and very foetid stools, which appeared full of matter, and sometimes with bloody clots; and so frequent, that very often he would go to stool twenty times in three or four hours, with his tenesmus, or inclination to go to stool, still upon him. At length there broke out fungous, livid and black caruncles, or warty nodes, some of which were at least as big as a nutmeg. But however frequent his going to stool generally was, yet sometimes, especially in the height of the disorder, he would be very costive, and in exquisite torture, so that there was a necessity of using either clysters or cathartics; and at times the patient would, as if starved, greedily devour whatever was given him, and again nauseate the most exquisite dainties. He became daily more emaciated; his urine was always bilious, and in less than the common quantity; and his countenance wan, and often of a yellowish cast. He bore his long and painful illness with the greatest resolution, till at length a puffy swelling in his feet, a delirium, a sunk and hollow countenance, and

cold and clammy sweats, (the certain presages of death) came on.

Different preparations of ipecacuanha were prescribed by several of the most skilful and celebrated in the whole profession; as well as emetics, stomachics, deobstruents, incarnatives, balsamics, and all sorts of astringent clysters; but all were ineffectual, only that laudanum gave the patient some short relief. The Bristol, Bath, Spa, and Pyrmont waters, and a long continued and exact milk and vegetable diet, were all tried to no purpose, though for a few days he sometimes would seem a little refreshed.

CASE XLIV.

Of a Feather swallowed by a young Lady.

A Young lady, who had been long subject to violent head-aches, which sometimes deprived her of her reason, was suddenly attacked with a severe fit of this distemper, upon the death of a favourite brother; and, to add to her distress, she had the misfortune to swallow a feather, which she had thrust down her throat to provoke vomiting.

Those about her made several attempts to extract it with their fingers; but these not answering expectation, she drank warm water, and vomited plentifully without discharging the feather. A surgeon was then sent for; who being made acquainted with the circumstances of the case, desired the assistance of a physician on this pressing emergency.

As it was the third or fourth feather of a goose-wing, whole and entire, without any part being cut off, it was agreed that all possible means ought to be employed without delay to extract it, as fatal consequences were to be apprehended from so stubborn and indigestible a body getting into the stomach: and the physician having mentioned the sponge, and the whalebone, among the instruments which might

might be wanted, the surgeon objected that this would more probably push it down than bring it up; but he immediately retracted his opinion, when it was observed to him, that the largest end of the shaft being uppermost, the slanting position of the threads which compose the web might readily allow the instrument to pass beyond them, and catch hold of the sponge as it was drawn back again; more especially, if the sponge was introduced dry, and permitted to swell by imbibing moisture in the gullet.

After having considered the affair attentively, the physician and surgeon went to the patient's lodging, furnished with all the proper instruments they could possibly stand in need of; and particularly with a long, flexible whalebone, to each extremity of which a piece of sponge was fixed, with two strings reaching betwixt each. The strings were added to the instrument by an ingenious practitioner some years ago, when he had occasion to use it, that he might have it in his power to extract the sponge, in case it should break loose from the whalebone in the gullet; and it was readily perceived they might be of singular service in the present case, by laying hold of the web, if the whalebone was turned round it's axis.

At their arrival, they found the patient not very clear in her senses, so that she was incapable of giving a distinct account of what she felt; nevertheless, she complained of an uneasiness in the right side of her neck, though she drew her breath easily, and swallowed without any great difficulty.

An attempt was first made, by depressing the root of the tongue, to inspect the entrance of the gullet, and try if any part of the feather could be seen or reached with the fingers; but this being to no purpose, the surgeon introduced the smallest end of the above-mentioned instrument into the left side of the throat, to avoid pushing down the feather, which there was reason

to apprehend was lodged in the right side of the gullet; and having thrust it far down towards the stomach, he began to make the extraction by slow degrees, inclining the end of the instrument he held towards the left side, and twisting it round repeatedly, that the strings might have a better chance to take hold of the feather.

This first attempt, as well as a second made in the same manner, proved unsuccessful; but the third time, the surgeon having introduced the largest end of the instrument as far down into the gullet as possible, was fortunate enough to bring up the feather with it into the entrance of the passage, from whence he extracted it with his fingers about two hours after it had been swallowed.

The lady was bled largely that evening; she afterwards had a clyster injected, and blisters applied to her ancles: notwithstanding these precautions, her throat was enflamed so much the next day, as to prevent her swallowing, which made it necessary to repeat the bleeding, and to prescribe nourishing clysters; after which the inflammation subsided, and the patient speedily recovered.

CASE XLV.

Of the Effects of a small Quantity of Arsenic.

A Lady finding some arsenic among other things for the use of the family, and not knowing what it was, put a little of it into her mouth, as people commonly do when they would discover things by their taste. Soon after, she was informed what it was; but being, as she thought, certain that she had swallowed none of it, she could not be prevailed upon to use any precaution, and felt no inconvenience for twelve hours. But at the end of that time, she became suddenly giddy; and being carried to bed, her body was all over so convulsed, that the bed and chamber shook.

shook with the violence of her motions. About four hours after this attack, a physician was called in, who finding the patient in this condition, that it was too late to give her a vomit, and that she neither complained of any disorder in her stomach or bowels, he gave her as much oil of sweet almonds as she could bear; and ordered an injection of olive-oil, by way of clyster, which brought off a number of hard excrements, of the shape and figure of sheeps-dung, and of as deep green a colour as capers; and this injection was repeated till the clyster came away as it was injected, without any of these excrements.

The convulsions, and frights in her sleep, procured by liquid laudanum given in emulsions, still continued; and she awaked frequently with such startings, that had not a person in the bed held her firmly, she would have been thrown out of it. In this condition she remained a whole day and night.

The day following, her body, but especially her head, face, and neck, were all covered over with red spots like measles, with excessive glowings; and she had the tingling in her ears. Her other symptoms, however, began to abate.

To advance the eruption, and, by this means, to carry off the internal disease, diascordium and volatile medicines were administered; by the use of which, she recovered of all the symptoms from poison in five or six days, but remained deprived of an excellent constitution several years.

CASE XLVI.

Of the good Effect of Magnesia in violent Vomitings.

A Woman, aged 34, the mother of several children, was taken, in the fourth month of her pregnancy, with violent vomitings; which growing daily worse, notwithstanding the endeavours of her apothecary to restrain them, brought on at the end

of a month such severe pains in the stomach, and spasms in her belly, as to occasion abortion. The vomitings were not lessened by this event, but grew worse; and frequently occasioned general convulsions to such a degree, that she was many times supposed to be at the point of death.

Scarce any medicine staid with her; she brought up almost instantly whatever was given her as nourishment, either in a solid or liquid form. She was exceedingly pale, and very much emaciated; her flesh was cold to the touch; and though her urine was little in quantity, it was perfectly limpid. She had a continual thirst, and was in a considerable degree costive. Her pulse was alternately slow and quick; and she was frequently tormented with the hicough. The pain in her stomach was severe, and constant; and whatever she brought up, was acrid to such a degree, as to make her mouth and throat very sore. These parts, upon examination, appeared high-coloured, and in many places excoriated; and the pain she felt in her stomach, upon swallowing any liquor that had the least degree of acrimony, or was more than lukewarm, made it probable the stomach itself, in it's internal surface, was affected in the same manner.

In this wretched state, a physician was consulted, who was at first much at a loss how to relieve a patient so debilitated, and whose stomach was in so diseased a state that it seemed incapable of retaining any appropriated remedies long enough to correct the acrimony of the juices and restore the secretions to a more mild and natural state. Anti-emetics of various kinds had been tried without effect, particularly saturated solutions of alkaline salt in juice of lemons. Stomachic medicines of the warm and aromatic kind she could not bear, on account of their poignancy; and though nothing could so speedily correct the almost caustic acid as solutions of alkaline salts, neither the

the entrance to the passage, or the gullet, could bear their acrimony.

All expectations of relieving this patient, small as they were, depended upon being able to neutralize, and thereby lessen the stimulus of the acid of the stomach. To accomplish this was not very easy, as no medicine in small doses could in any considerable degree correct so intense an acid; and, in the present situation, it was difficult to get any medicine to stay long enough to exert its effects. To discharge, however, what acid matter might be already accumulated in the stomach, the patient was directed to drink plentifully of small, warm, unsalted mutton-broth; and vomit with it so long, that it should be discharged with no other taste than that of broth. This was complied with, and a large quantity drank. The pain in her stomach ceased upon this for more than two hours, and was after that time apparently coming on with the same violence as before. Upon which, a dram of magnesia was ordered to be given in two ounces of veal-broth. This kept down, and eased her; it was therefore directed to be repeated as often as the pain returned, without any regard to the quantity that the whole might amount to, supposing that the pain continued severe. This was done; and in three days she took three ounces of magnesia, of which very few doses were vomitted up, and she was purged considerably.

This medicine was continued, in a somewhat less quantity, for three days longer, in which she took two ounces more of magnesia. By this time the vomitings ceased, the convulsions left her, she had no pains in the stomach, and her mouth and throat lost their intensely red colour and soreness; nor did even her eructations longer indicate any acidity.

Besides veal-broth, she was allowed boiled rice, and now and then some rice-gruel, with a small quantity of brandy; and, after a few days more, she could retain boiled

chicken, and other light solid animal food.

When her stomach was in this state, she took liberally of the decoction of Peruvian bark, with a small portion of French brandy; by which, and her nourishment, she recovered her strength surprisingly. To this medicine, as she was during the latter part of her illness considerably dropsical, were added some preparations of steel; and in about a month she perfectly recovered.

When this patient's stomach was relieved, the thirst, the general and partial spasms, and other complaints, which were merely symptomatic, soon ceased; and what remained of her cure was by no means difficult.

CASE XLVII.

An uncommon Swelling of the Knee.

A Countryman had, for several months, an uneasiness in walking, from a pain in his left knee, which had received no observable injury. When the pain was greatest, he found something of a hard body immediately under the bending, generally at the inside of the leg, though sometimes at the opposite; and could get no ease, till, by chafing it upwards with his hand, he made it disappear. The parts about it were enlarged, as in the case of a white-swelling at this joint, though to no great height: the hard body always made its appearance upon walking; so that, when a surgeon came to see him, the patient was obliged to take some turns through the house before he could make him sensible of it; he then easily caught it between his thumb and finger, where it was felt so distinctly that he supposed it had its seat immediately under the skin, which induced him to pull out an instrument to open into it; but the patient, not having resolution to submit to the operation, pleaded for some days delay, to consider of it; after which, he came to the surgeon's house, with some of

his friends, and acquainted him that he was ready to undergo it, as he was perpetually upon the rack, by the falling down, as he called it, of that body, which happened every moment of the day when he offered to stir. It appeared so loose and superficial, that the operator had no manner of doubt of success; and, with a proper knife, immediately began to make an incision upon the body, which, in the mean time, he held between his finger and thumb; but, to his great surprize, when he had made his first incision through the skin and fat, he found a membranous strong bag between the instrument and the tumour, which made him sensible, for the first time, where this floating body was lodged: however, though he now considered the operation as more important than formerly, he was satisfied nothing else could help the patient but continuing the incision, which he did; and, upon entering the bag, there were at least four ounces of a thick pellucid humour issued out with the hard body, which he found much of the shape, though larger than a kidney-bean. It then appeared wholly cartilaginous, and very smooth and protuberant; but, upon drying, it shrunk in, and shewed itself a bone covered over with cartilage. In cutting through the bag, which was firm and thick, the patient expressed the utmost pain, which abated upon taking out the body; and after the evacuation, the patient was earnestly desired to stay in town that night, that his surgeon might more conveniently attend him, but nothing would persuade him; so that, after some hours stay, he mounted his horse, and rode in the night two miles into the country, in a severe frost, which raised the pain of his knee to the greatest height, and obliged him to send express for the surgeon at midnight, who ordered the part to be fomented with the most anodyne softening materials he could recollect, but with little success: his knee swelled exceedingly all

round; and, what was observable, he did not make so much complaint of the place where the incision was made as at the opposite side. He was bled and purged with calomel frequently, but all to no purpose, being, notwithstanding all that could be done to him for a month's time, seldom free from such pain as occasioned horrid cries and complaints; nor could he suffer his leg to be moved in the most gentle way, or take any rest but what was procured by opiates. Bladders of water round his leg, as warm as he could bear, had little influence; but water, syringed, took more effect, which two men were employed by turns in doing for near an hour at a time, from a large clyster syringe; but though this occasioned an abatement of the pain and swelling, yet it did not carry it quite off, till a caustic was applied to the outside of the knee; which being kept running, and the syringing continued, it gradually wore off in about a year's time, so that he remained quite free of all complaint and swelling, and walked about without any impediment.

C A S E XLVIII.

Of a Locked Jaw.

A Soldier, aged 23 years, of a thin make, but healthy constitution, on the 15th of January 1762, was wounded in the arm with a cannon-shot. An excellent surgeon (to whose great attention and abilities this man principally owed his cure) having examined the wound, judged amputation necessary; but the head of the shoulder-bone was so much shattered, that he was obliged to amputate at the articulation of that bone with the blade-bone. He saved as much of the skin as possible in the operation. The wound digested, and looked well; but as the discharge was great from so large a surface, the patient was put upon a course of the bark; notwithstanding which, by the eighth of February, he was much reduced

duced in his strength. About that time the granulations that had been red and pointed, became pale, smooth, and glassy, and the discharge grew thin and foetid. On the 9th he was removed from the hospital-ship into an hospital. On the tenth (which may be reckoned the first day of the locking of the jaw) he complained of a stiffness of his neck and jaws. These parts were fomented, and afterwards rubbed with oil in which a small proportion of camphire was dissolved. The next day (the second) these symptoms increasing, a physician was desired to visit him. His jaws were locked; his neck and the whole spine were rigid; his pulse was but little changed from that of health. The rigid parts were fomented, and afterwards embrocated with the camphorated oil and thebaic tincture. This was done twice a day through the course of the disease. The wound was dressed with a poultice of bread and milk only. His body was kept open by a clyster administered occasionally. His diet was water-gruel, panada, and broth, with an allowance of wine. He was ordered the following bolus.

Take of Venice treacle one scruple—of musk, ten grains—of opium, one grain—of simple syrup, enough to make a bolus. To be taken every third hour.

On the third, the rigidity was greater. He swallowed with difficulty: the medicine was therefore changed for one in a liquid form.

Take of musk julep eight ounces—of liquid laudanum, half an ounce. To be taken by a spoonful at a time.

He consumed this quantity daily till the 6th, when the spasms had abated considerably; but nauseating the medicine, he took one grain and an half of opium every fourth hour. On the 7th, his jaws were more fixed, and two grains of opium were then administered six times a day. On the 8th,

the spasms had increased to such a degree, that he could not swallow the pills of opium; he was therefore ordered eight ounces of the musk julep, with one ounce of the thebaic tincture, to be taken in twenty-four hours. On the 9th, he was much worse; the spasmodic pain at the point of the stomach, which always accompanies this disease, returning frequently with more violence, and striking suddenly from the breast to the back, brought on the *opisthotonos*, with the cynic spasms, and it's other attendants. The convulsions, the heat of the weather, and possibly the medicines, all contributed to keep him in a constant sweat. Half an ounce of musk rubbed down with sugar, and a dram of opium, were mixed in a pint of common julep, of which he took two spoonfuls at such intervals as to consume the whole in twenty-four hours. He continued this mixture till the 13th, when, being much better, the quantity was lessened by a fourth part. The wound having a good appearance, was dressed again in the common way with dry lint. On the morning of the 15th, continuing to recover, he was ordered to take the last mixture with only half the quantity of the musk; but his nurse neglecting to give it in the night, the next day (the 16th) his jaws were again considerably locked: however, upon once more taking the medicine regularly, he was, by the 17th, much relieved. On the 19th, being free from all spasmodic complaints, he was ordered to take the opium alone, which he did in less quantities, and at greater intervals, till the 8th of March, when he first left it off entirely. On the 24th of March the wound was cicatrized, and the patient in every respect well.

CASE XLIX.

Of an extraordinary Cure of an Epilepsy.

A Woman, about 38 years of age, had laboured twelve years under an epilepsy, which,

which, from one fit a month, was come to four or five violent ones every day, each continuing an hour, or an hour and a half, by which she was rendered mopish and silly, and incapable of taking care of her house and family. Her husband was reduced in his circumstances, from his affection and care for her, having got and followed all the advice he could. Evacuations of all kinds had been tried; the epileptic and cephalic tribe of medicines had been ransacked; and many others had been used in vain, the disease growing more severe. Her fit always began in her leg, toward the lower end of the calf, and in a moment reached her head, threw her down foaming at the mouth, with terrible distortions of the mouth, neck, and joints. A surgeon being at length consulted, she fell down in a fit whilst he was talking to her; and he immediately examined the leg, and found no swelling, hardness, laxness, or redness, nor any appearance in that place different from the other leg: but suspecting, from her fit beginning always at that part, that the cause of her disease lay there, he immediately plunged a knife about two inches into it, and found a small hard body, which he separated from the muscles, and then took it up with a forceps. It proved a hard cartilaginous substance, or ganglion, about the size of a very large pea, seated on a nerve, which he cut asunder, and took out the tumour. She instantly came out of the fit, cried out she was well, and never after had a fit, but recovered her former vigour both of body and mind.

CASE L.

Of a Salivation suddenly checked by Cold.

CAPTAIN V—a Dutch officer, of about 24 years of age, and of a naturally active disposition and healthy constitution, was ill of a fever, with an inflammation in his eyes; and complained very

bitterly of a violent pain in his hands, wrists, and feet, but with very little swelling, and no discolouring of the parts, and which he had been informed was the gout, for which reason he had borne it patiently for above three months, thinking that nothing either could or should be done in that case; but finding that he was extremely feverish, he now desired the assistance of a physician, who proceeded to treat him in the manner which he thought most suitable to his different complaints; by which he soon got the better of his fever, and of the inflammation in his eyes: but notwithstanding all his endeavours, the pains still continued equally strong and immoveable; and though he made use of every remedy or application he could think of, none of them gave him any relief, or seemed to make the least impression upon his disorder; till at last, asking him one day, whether, over and above the medicines ordered him, he was taking any mercury, (a suspicion of which arose from his breath) he protested he had taken nothing of that kind for near four months past; but that he had some shankers and a gonorrhœa four or five months before, for which, indeed, he had been taking some mercurial pills, which, contrary to the intention of his surgeon, had thrown him into a gentle salivation; but that the spitting had been suddenly stopped by the excessive cold weather he had been exposed to one day on a march from Newcastle to Hexham, where the king's troops suffered extremely by the hard weather; and that his feet and hands were then so benumbed with cold, that he thought he should never recover the use of them; but that, as they grew warmer, the numbness went off, and was succeeded by an excruciating pain, which had never left him since that time. Upon this discovery, some pills were ordered with guaiacum, to be taken morning and evening, with one grain of calomel in each dose, and to be washed down with a draught

draught of warm decoction of the woods. This he continued for four days, when, after having taken only seven grains of calomel, he fell into a very plentiful salivation, upon which the pains remitted, and the swelling of his limbs subsided; so that, in a few days, he was perfectly cured, and the salivation was ended in a very little more than a fortnight.

CASE LI.

Of an Aneurism, occasioned by unskilful Bleeding.

A Countryman had the misfortune, in being bled in the basilic vein of the right-arm by some gardener, to have his artery hurt, which was followed by an aneurism. More than a year after the accident, he was received into an infirmary; and the surgeon in attendance performed the operation. After the tourniquet was applied, he laid open the tumour from one end to the other, with one longitudinal incision; then taking out the polypous substance, and a small quantity of liquid blood, the small aperture of the artery was so plainly seen, that a physician, who was present, put a probe into it, and raised the trunk of the artery, while the surgeon passed the needle behind it, the sides of the wound being held asunder in the mean time by two blunt hooks. The proper membrane of the tumour was considerably thicker and stronger than usual, and required force to push the blunt aneurism-needle through it; but the nerve was pressed by the tumour a good way from the trunk of the artery, so that there was no danger of taking the nerve within the ligature. After making the superior ligature, the tourniquet was untwisted, but no blood came by the orifice; the second ligature was, however, made below the orifice, for security; the cavity was filled with soft lint, and the other ordinary dressings applied. That afternoon his hand swelled, and became warm, which removed all fears of the circulation being entirely stopped. No

pulse was to be felt on either side of the wrist for several days; but in about twelve days, when both the ligatures suppurred off, the pulse was plainly to be felt on both sides of the wrist, and the cure was soon compleated, the patient having as much strength and motion in that whole member as ever.

CASE LII.

Of three different Growths of Teeth succeeding one another.

A Child of four years old, in the month of July, was taken ill of the measles; she had a large eruption, but recovered, without much danger through the disease. Three days after the crisis, she was seized with a violent fever, and complained of a particular uneasiness in her teeth; soon after her face was swelled, so that it was with a good deal of difficulty that she opened her mouth. At first, the swelling was considered as a symptom of her having caught cold, for which she took some medicines, which brought on a plentiful perspiration; but the swelling of her face still kept up, and at a week's end she complained of the foreness of her teeth being increased. A surgeon was then sent for, who examined her mouth, which exhaled a very foetid smell; he perceived a slough on the left side of the palate, and the gums of her upper jaw, which, though she took a decoction of the bark, and used detergent gargarisms, increased so fast, that the next day the gum of the lower jaw was affected round the grinders. She was now exceedingly emaciated, coughed frequently, had hectic heats and nocturnal sweats, for which she was removed into the country, where, with a milk diet and the bark, she grew a little better; and by the use of the gargle, in a fortnight, the slough separating, left half of the palate-bone bare and foul for the breadth of a sixpence, close to the teeth, which were quite loose in the upper jaw; and on the separation of the gum from the lower jaw,

the teeth were so very loose, that on touching, two of them followed her finger. The bark and gargarisms were continued, and a doffil of lint, dipped in the gargle, introduced between her cheek and jaw. This method was persisted in, an exfoliation being expected; and in six weeks the surgeon having hold of the second grinder, which was very loose, as he moved it, a large portion of the jaw (more than he expected) moved with it; and on the child's suddenly withdrawing, the exfoliated piece of jaw, with two teeth, separated, and exposed to view two small white teeth, like those of an infant that have newly cut the gum. The face was kept warm, and a doffil constantly in her mouth, moistened with red Port and water, with a little tincture of myrrh. During this time the gum of the lower jaw was not in the least grown up, and the jaw and holders became yellow, notwithstanding they were kept constantly defended with wax. The second tooth of the grinder in the lower jaw, which had been long loose, she complained hurt her upper jaw whenever her mouth was shut, and moved the new teeth when it was not covered with lint. But there were objections against taking it out, as it prevented the lip from falling inwards, and yet it was necessary to give every chance for the new teeth to continue, as they hitherto looked extremely well; but a day or two afterwards, the surgeon found the lower jaw shake, and that an exfoliation must follow: he waited, however, nature's time, and in four months from her first seizure, a shell of the lower jaw separated, and discovered three teeth like those which were in the upper jaw. The second jaw-tooth, which he apprehended would fall in the exfoliation, remained firm, and appeared just like one grown yellow by age. On the day following, one of the new teeth came away, and appeared a mere shell, resembling that of a foetus. In a week afterwards, both of the new teeth dropped from

the upper jaw, and the gum closed; the mouth healed in a fortnight, at which time the new teeth in the lower jaw continued fast in their socket. At the end of six weeks from this time, a new tooth was observed just shooting through the gum in the upper jaw, in the place of one of the teeth that had dropped out; this grew very fast, and was soon followed by another, both which became firm and serviceable.

CASE LIII.

Of the Use of the Bark in a Mortification.

A Gentleman of the very advanced age of 76, who had enjoyed uncommon good health all his life, having been scarce ever sick, or out of order, till he was seized with a partial palsy two or three times, of which he recovered so well, that he walked abroad with the help of a stick. On the 10th of April, he complained of a pain in the toe next to the little one of the right-foot, but neglected it two or three days, till the pain increasing with an oozing of thin humour from a small black spot, and his ankle swelling, some tincture of myrrh and aloes were applied to it.

On the 14th, the swelling had gone a good way up his leg, and the spot was very black and dry. Antiseptick fomentations, as well as the tincture, were now used; notwithstanding which, and a mixture of the juice of hemlock, and spirit of sal ammoniac with the tincture, all the symptoms increased next day. The physician now prescribed a draught of the bitter decoction, in which half a dram of the Peruvian bark was boiled, to be taken every morning.

The day following, being the 17th, the bone of the toe appeared bare, the flesh round it mortified, and black spots were seen upon the ankles and calf of the leg.

The 18th, the toe was cut off at the second joint, a digestive was applied, and the leg was embrocated with spirit of wine,

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sal ammoniac, and camphire; and all the medicines being continued, there was no great change for three days.

On the 21st, the black spots looked paler, but the toes were all livid.

On the 22d, his pulse intermitted, and he was very uneasy.

On the 23d, the toes were very black.

On the 24th, the sores were fœtid, but the black spots in the leg began to disappear.

On the 25th, the spots were of a pale red colour, and the patient had great pain in the sole of his foot.

No great change on the 26th and 27th.

On the 28th, the little toe was cut off, and there was an appearance of suppuration, with violent pain in the sole of the foot.

On the 29th, the patient had no sleep, was very feverish, raved, and looked wildly. An emollient poultice was now applied to the sole.

On the 30th, the raving continued. The swelling of the leg was almost entirely gone, and it had no spots on it.

On the 1st of May, a quantity of thin bloody matter was let out by an incision in the sole of the foot, where the tendons were bared, and very tender.

On the 2d and 3d, as before.

On the 4th, the two remaining lesser toes, having mortified, were also taken off. The great toe appeared a little livid.

On the 5th, the upper part and sole of his foot appeared ill-coloured; the patient's appetite now, for the first time, failed him.

On the 6th and 7th, little change.

On the 8th, fifteen grains more of the bark were added to each draught.

On the 9th, the swelling in the leg was much diminished.

On the 10th, the ulcers in the foot enlarged.

On the 11th, as on the 10th.

On the 12th, towards night, he had fre-

quent faintings, an intermitting pulse, great oppression and sickness, with strugglings. Compound spirit of lavender, and aromatic saline spirit, were now administered.

On the 13th, the patient was much relieved, but still remained confused in sense and appearance.

On the 14th, he was calm and chearful, with a regular pulse.

On the 15th, the swelling of the leg being now gone, the spirituous embrocation was laid aside.

On the 16th, the ulcer was cleaner. Half a dram more bark was added to each draught.

From this time to the 26th of June, his cure seemed to go on successfully, with his dressings and decoction; but on this day the foot began to swell, with great pain.

On the 27th, the swelling increased up the leg; and the great toe, which had been hitherto of a blueish colour, became nearly black. The decoction was continued, and the spirituous embrocation was again used.

The swelling, with black spots about the ankle, increased up to his knee before the 7th of July, when the ulcer in his foot was black. Instead of the bitter decoction, he was now ordered to take half a dram of the bark in substance, morning and evening.

On the 8th, black spots appeared above as well as below the knee; one of them was two inches in diameter.

On the 9th, the swelling of his foot decreased.

On the 10th, his right testicle also swelled.

Little change till the 15th, only the swelling of the testicle abated.

On the 15th, the patient would sit up. The leg swelled greatly.

On the 16th, many small, livid, or pale red spots, appeared above the knee.

Till the 20th, the appearances were all mended; the swelling diminishing, the spots going off, and the ulcer digesting.

On

On the 20th, he had got little sleep; had great pain; his pulse was oppressed; and he was faintish: he took some cordial drops without any relief. The dose of his bark was increased to two scruples morning and evening.

The next day the leg looked worse, but much better the two following days.

On the 24th, in the night preceding this day, he had a great sweat in the thigh and leg, and the swelling was fallen two inches.

The cure went well on with the bark, without any new symptom, till the 10th of August, when a small tumour was observed near the heel, the matter from which discharging at the ulcer in the sole of the foot, it was afterwards cured by compression. The swelling of the leg appearing now to be only puffy, was bandaged up to the knee. In the beginning of October, when the sores seemed to be nearly cured, he omitted the bark; but a blister, as big as a hen's egg, rising on the great toe of the left-foot, and two days after, such another appearing on the great toe of the right-foot, he returned again to the use of the bark. The skin which these covered appeared fresh and clean. The other ulcers were nearly healed; and the bark was directed to be continued some time after the cure, to prevent more returns.

It is to be remarked, that during all the time of the cure, except when the patient was sick and oppressed, he would not be confined to any regimen in diet, but indulged himself even in a plentiful use of salt meats and strong malt liquors.

CASE LIV.

Of an Aneurism.

A Stout, healthy man, 25 years of age, was admitted a patient into the Manchester Infirmary on the 28th of February, for an aneurism of the femoral artery, occasioned, a little more than three months before, by the following accident. Sitting

with his wife, he unluckily took up a pair of sharp-pointed scissars; and attempting to cut a flaw, or what the good women call the step-mother's blessing, from the root of the nail of one of his fingers, he dropped the scissars; and suddenly clapping his knees together, to prevent the scissars falling to the ground, forced the point into his thigh, and wounded the artery. A small quantity of blood instantly spurted out from the punctured vessel; the bleeding was soon stopped, and the external wound healed up in a day or two. After which, a small tumour formed in the thigh; which growing gradually larger, and somewhat painful, a surgeon of eminence was sent for, who having tried various remedies to no purpose, and finding the tumour still growing considerably larger and more painful, directed him to take the advice and assistance of the surgeons at Manchester. From this account of his own case, and from examining the tumour, it was immediately concluded to be an aneurism; and on the 4th of March following, the operation was performed. After the crural artery was secured above by the tourniquet, an incision was made the whole length of the tumour, at least seven inches; and having cleared away the grumous clots of blood, to the quantity of a pound or more, the tourniquet was slackened; on which the blood immediately gushed out of the punctured vessel with great impetuosity, and plainly discovered from whence it came. The tourniquet was then instantly directed to be made tight, and the remaining part of the blood was soaked up from the naked artery, with a sponge dipped in warm water, which laid in view the puncture, about as large in diameter as would admit of a crow's quill. A needle, threaded, was then passed about half an inch above, and again below the orifice of the wounded artery; and both parts of the vessel secured by ligature, without dividing the artery. The wound

wound was filled with lint, and covered with large pledgets, spread with yellow basilicon, and a gentle easy bandage over all. On the 6th of March, a slight hæmorrhage ensued, which made it necessary to take off the dressings, when it was perceived that the upper ligature was too slack; the threaded needle was therefore passed as before, a little higher than the first, and included a small bit of plaster rolled up as a compress, within the ligature, for fear of cutting the artery; and by way of farther security, the same was done below, and the whole was dressed as before: not the least hæmorrhage appeared afterwards; the wound digested very well; the injured part of the artery sloughed off, with the ligature, in a short time; the external wound was healed up in six weeks; and the patient discharged, perfectly cured, on the 17th of April following.

CASE LV.

Of periodical Discharges by an Ulcer.

A Healthy, vigorous, labouring country-girl, of ordinary stature, strained her right-foot at 15 years of age, and again at 19, when a foul ulcer broke out in it. This being healed up in three weeks, she soon after complained of a disorder through all her body. At 20 years of age, her periodical discharges appeared for the first time, but in a very small quantity.

The former disorders still continuing, she was blooded in the right-foot, soon after which, an ulcer was formed in that ankle, which had continued about five years; a considerable share of the heel-bone having come out. This ulcer emitted in two or three days of each month, as large a quantity of blood, as women generally pass in their evacuations, and this in regular periods, without any bleeding at the intermediate time. Some days before this periodical hæmorrhage, she always complained of great pain in her foot, which became tole-

rably easy as soon as the evacuation was past. She continued in this way for five years, when the bones being cast out, and the ulcer beginning to heal up, while her body grew more plump and strong, the discharges came the natural way, in much the same quantity, and continuing the same time they used to do at her foot, which did not then bleed at all. She had a second natural return of the discharges in June; but in July she passed the natural period, and her foot became more painful; but the evacuations returning as in other women, the pain ceased, and after that time she remained in good health, with her discharges regular in the natural way, without any other evacuation than of a small quantity of matter at the ulcer, which still continued a little open.

CASE LVI.

Of a Palsy occasioned by a Fall, and Compression of the spinal Marrow.

MR. H—, aged 14, enjoyed a good state of health previous to his last illness; he was sensible, of a sprightly disposition, and well-proportioned for his age. A physician was called to visit him on the 8th of March, and found him paralytic, from below the breast without any sense of feeling, or motion in his legs, and a total incapacity of retaining urine and stools.

He gave the following account of his case, which was confirmed by his father and his apothecary. He said, that two days before the last Christmas, in playing with one of his companions, he was pulled backwards, and fell upon the edge of a chair, which hurt him a little between the shoulders; when he came home in the evening, he complained, that upon raising his head, he had a pain striking through and across his chest, and his father observed that he held his chin down towards his breast; but as he concealed his having had a fall, and as his complaints were not very

troublesome, he went to school in the country, where he remained till the 29th of January, but growing worse with paralytic symptoms in his legs, he was brought to town. The day he came home, he had very little use of his legs; however, in the evening, after having them well rubbed, he made shift to scramble up stairs, but fell down on the floor of the bed-chamber, and afterwards lost the use of his legs entirely. On the 7th of February, he lost the power of retaining his stools; and two days after that, his urine came away involuntarily.

From the time of the fall to the day of his death, was about three months, but three days before he died, he complained of shooting pains in his arms, which lasted about half a minute at a time, leaving him quite easy, but frequently returning.

The day before his death, he lost the use of his arms, and the motion of his head; complained of violent shooting pains through his head; was perfectly sensible to the last moment, and died totally paralytic on the 31st of March, without a groan or convulsive motion.

CASE LVII.

An uncommon Sore Throat.

A Man, 34 years of age, subject all his life to plethoric indispositions, especially in the spring, and to catarrhs when the least exposed to cold; who had not used any fermented drink or heating food for several years, and had retrenched some of his ordinary diet for near two months, to prevent his vernal plethora; having sat several hours in a chamber, without a fire, and with an open window, while the weather was very cold, and the air foggy, about the middle of January, complained, as soon as he rose from his seat, of being stiff with cold, and very weary, with pains in moving all his muscles, and perpetual yawning. To free himself of the uneasy coldness, he

immediately went home, sat near a fire, and drank tea; but could not remove the shiverings and weariness. Upon going into bed, he was seized with the appearance of an aguish paroxysm, which had made a regular course before morning.

The next day he was a little feverish, and still complained of pains through all his body; and therefore took his usual cure in slight maladies of that kind, viz. a laxative phtisan, in which tamarinds and senna had been boiled, which operated gently, and gave him considerable relief. The day following, he was almost free of all his former complaints, but his right tonsil was swelled and painful, for which the phtisan was repeated.

In the morning of the 4th day the tonsil was less and easier, and except a little bitterness in the mouth, he had scarce any other uneasiness; but in the afternoon the left tonsil became painful, on the least attempt to swallow, his pulse turned quick, but not very strong. He was let blood from a large orifice, in one of the greater jugular veins, to the quantity of 16 ounces; after which his pulse became very quick, strong, and full. On this appearance of plethora, eight ounces more were taken away, and the patient was then inclined to faint; but in a quarter of an hour after, his pulse was very near as strong and quick as ever. The pain of the left tonsil was so far from being diminished, that it continued increasing; and all the teeth in the same side of the lower jaw, which were otherwise very sound, were also violently and constantly affected: but the pains were most exquisite when he swallowed. In the mean time he could open his mouth as wide as ever, and nothing preternatural could be observed in the entrance of the gullet, except a small swelling of the right tonsil, and an erysipelatous redness of the uvula and left tonsil without any tumour. After he went to bed, the pains were so racking, especially when he swallowed his spittle, (which

(which he could not possibly prevent doing frequently, whatever care he took to the contrary) that though he was tolerably patient under pain, he made the whole bed shake with his tremblings, and large drops of sweat appeared on his skin, at each attempt. About midnight he could lie no longer, but putting on his cloaths, he received the fumes of warm water into his mouth, and the pain remitting somewhat, while he endeavoured to hinder the occasions of it's violent increase, by leaning his head forward, opening his mouth, and permitting the spittle to run out; he passed the rest of the night in a drowsy nodding way.

The next morning his swallowing was performed with great difficulty and pain, and he was so hoarse he scarce could be understood when he spoke; but he had no difficulty of respiration, and the fulness and strength of his pulse were less, but it's quickness remained. His throat had the same appearance as the night before. The purgative phtisan was repeated. The fumes of warm water were often made use of; and an emollient cataplasm was applied externally on the painful parts.

In the evening the pain was easier, and the pulse rather better; but the hoarseness continued. A blistering plaister was applied on his neck and back, and an emulsion was prepared for his drink. The plaister did it's office well, and the patient, notwithstanding his pain in swallowing, drank two bottles of emulsion in the night, which prevented any strangury till near noon of the following day, when the chamber being over heated, and the patient put into a sweat, the strangury came on violently, of which he was relieved, after some hours, by carrying away the fire, and injecting an emollient clyster with turpentine. The emollient poultice was in the mean time renewed, the fumes of water were frequently applied, and a mild resolvent gargarism assisted the evacuation of the matter, which began now to be produced

in an unusual quantity, in the entrance of the throat. In the evening the patient seemed, by his pulse, to be pretty free of fever, and all his troublesome symptoms were considerably removed.

The blistered parts, discharging plentifully the two succeeding days, he seemed to mend apace, but still continued the poultice, fumes, and cataplasm.

On the third, which was the ninth of his disease, finding in the morning the pain increased, he took the laxative phtisan, and plied the external medicines; but through the day the symptoms gradually increased, till in the evening his pain in the left tonsil and teeth was rather more violent than ever, the hoarseness was worse than formerly, his pulse was low and quick, he was drowsy, and passed little urine; no swelling could be seen on the left, painful side, and he breathed freely. He drank largely of warm posset, made with Rhenish wine, and chewed long pepper with the teeth of the affected side. His urine soon came in great plenty, he discharged large quantities of matter at the mouth, and in two or three hours was much more free of pain, his pulse became slower, and the drowsiness went off. The gargarism was renewed, with the addition of some sweet spirit of nitre, and Venice treacle was added to the cataplasm.

By the use of these medicines he was greatly recovered in the two following days, and nothing remaining the third, except a little bitter taste, a trifling swelling in the right tonsil, and a weakness in the left-side of the throat, he went abroad to his usual employment, using a spare diet for a week, and applying the external remedies; in which time he got quite free of all uneasiness, except a dull pain of the left-side of the throat, especially in yawning; and he imagined all the food he swallowed passed only by that side, where sometimes a little of it stopt, and was with some trouble passed back again into the mouth. To remove this weakness, the patient, one evening,

ing, gargled his throat with claret wine; that night he was sensible of a straitness in his breath; and in the morning, when he awaked, he was quite hoarse, breathed with more difficulty, and on coughing, his head and eye-balls felt as if strongly girded. His head became very red, and he began to hiss in breathing. All these bad appearances went greatly off after breathing in the fumes of warm water, and drinking warm tea. In a few hours after, he swallowed pills composed of sweet mercury and resin of jalap, which operated mildly, and lessened all the causes of complaint considerably, and a second such dose taken two days after, removed all of them entirely, except a little weakness of the left-side of the throat, and a dull pain there in yawning, which remained several weeks after.

C A S E LVIII.

Of a Hernia Humeralis, or Rupture in the Testicles.

ON Thursday, the 27th of February, a physician was called to a gentleman between thirty and forty, labouring under a pain and swelling of his testicles; and upon his enquiring into the cause of these complaints, he gave the following account: that about a month before he had contracted a gonorrhœa, attended with a copious discharge from the urethra, with heat of urine and other ordinary symptoms; that he immediately applied to a surgeon, who directed him to make use of an injection, which very soon stopped the discharge. He then observed this swelling in his testicles, which continued for some time small, and rather sore than painful. It was also accompanied with a difficulty in making water, which he said came from him in a little stream, and in a very small quantity at a time. For this complaint he had a bougie introduced, which brought on a plentiful evacuation, and gave him relief. This dis-

order, however, of the urethra and bladder he paid but little regard to, as it did not confine him to the house, nor prevent him from going as usual into company; an indulgence which, probably, did not a little contribute to the fatal termination of the disease. Within five or six days before the physician saw him, the swelling of the testicles was much increased, and became very painful. Upon examination, the testicles appeared to be much enlarged and inflamed, as also the substance of the scrotum, which had acquired an uniform globular appearance, and was equal in size to a large sheep's bladder blown. The pain was not solely confined to the scrotum, but seemed to follow the direction of the spermatic chord, and gave him a good deal of uneasiness in his loins. His pulse was quick, but neither full nor hard; his thirst was considerable, and attended with universal heat.

He was immediately directed to lose twelve ounces of blood, to take a cooling purge, to lie in bed, and to make use of the common fomentation morning and evening, covering the scrotum afterwards, with a cataplasm of bread, milk and oil; to keep the part suspended with a bag-truss, and to drink plentifully of barley-water, and such small diluting liquors; as also to be very sparing in his diet, and to confine himself to water-gruel, panada, or some such food. On Friday morning his feverish symptoms were much abated, though he had passed the night but indifferently, the pain being constant and very great. The tension and swelling were not lessened, but on the contrary increased, and the spermatic chord appeared to be more enlarged, and much harder. He was now ordered to be bled again immediately, to continue diluting plentifully, and to take a scruple of nitre every four hours, in a draught of barley-water, or some other small liquor; also the fomentation and cataplasm to be repeated. He complained this day likewise of a tickling cough, which he said increased the pain

in his scrotum very much; for this he was directed to take half a scruple of the soap-pill at night.

On Saturday he had passed the night much better, but still his pain was very considerable, with the swelling and tension not at all abated. In one part there was an evident fluctuation of matter, which pointed outwards; all thoughts therefore of resolving the tumour were laid aside at present, and endeavours were used to encourage the maturation, by substituting a ripening poultice in the place of the former. The patient was also directed to take his soap-pills at night.

On Saturday morning, the fluctuation of matter was very manifest, though the quantity seemed to be but small: in order therefore to evacuate this matter, and to set the parts somewhat at liberty, an opening was made by an expert surgeon, and a small quantity of very foetid matter was discharged. The pain was not in the least relieved by this, the swelling was not diminished, nor was it any softer to the touch; but in a few hours all the symptoms became worse, and the tension was extended to the muscles of the belly.

On Monday morning the wound was covered with a slough at the bottom; the edges looked crude, and the smell was extremely offensive; the colour of the part was changed from a florid hue to a deep red; the pulse intermitted very frequently, and here and there upon the belly were small bladders. The patient wandered a good deal, and in a very few hours his senses were entirely gone. Deep scarifications were made, the whole length of the scrotum; the part was dressed with a warm digestive; an antiputrescent fomentation, with a large quantity of camphorated spirit of wine, was made use of, and the cummin-plaister applied over the whole. Some spoonfuls of a warm cordial mixture were ordered to be taken very frequently, and the whole treatment was of the cordial

and antiseptic kind; but neither the above mixture, nor any thing else, could be got down, or the patient would have been put upon the use of the bark. He died this evening.

On opening the scrotum, a small quantity of very foetid matter was found in the cellular membrane; the coat which immediately covers the testicles was thickened to a very considerable degree, though the testicles themselves were in a perfect sound state: hence it should appear that the disease in this case was not, as generally supposed, a disorder of the testicles, but that it was seated in the coat by which they are immediately covered.

CASE LIX.

Of a Mortification stopped by the Bark.

A Surgeon, of a very bad scorbutic habit of body, about 40 years of age, had a little pimple in the middle of the under lip, which his barber cut the top from in shaving him on Saturday the 9th of February. The following evening, upon going out to the cold air, the pimple swelled, and turned hard, with an inflammation all round it; which increasing the Monday following, he applied an anti-inflammatory fomentation, with spirit of wine camphorated. Notwithstanding the frequent use of this for four or five days following, and his being twice bled, the inflammation, hardness, and swelling, increased considerably, extending itself to the angles of his mouth, some way along the cheeks, and all round the chin, with great pain, and with vast disorder through his whole body.

On Friday the 15th, at eleven at night, a small black spot, about the bigness of a herring-scale, appeared; not where the wound was, but on the middle of the red part of the lip, which spread so fast, that by eleven the next forenoon, it covered near one half of his lip, which then began to stand out very much; when a consultation

of almost all the physicians and surgeons in the town where he lived was held, who advised the continuation of the fomentation and spirits as before, and a decoction of the woods. For two or three hours, the mortification continued to spread till it had covered almost his whole lip, reaching inwards and downwards to the gums, the hardness and swelling of the neighbouring parts increasing. Upon this, he was advised to try the powder of the Peruvian bark, half a dram for a dose. He took the first dose betwixt three and four o'clock in the afternoon, and his lip was dressed at ten at night, when the mortification did not appear to be increasing, at least the increase was very inconsiderable. He then took another dose of the bark. Towards the morning of the 17th, his lip was again fomented, and he took a third dose of the same medicine. At ten in the forenoon of the next day, the mortification had made no farther progress since the preceding night. At night the lip was dressed again; and then, for the first time, something like an appearance of suppuration was observable at the place where the wound, or rather pimple, was; but none at all on the mortified part. That night he took another dose of the bark, and continued to take two doses, one in the morning, and another in the evening, for a fortnight.

The fomentation and spirits being applied twice a day, and a little emulsion given him for drink, without any other medicine than the bark, the suppuration succeeded well in the mortified parts on the third day after he began to take that medicine; upon which, proper digestives and other dressings were applied. The sloughs cast off very well; the hardness and swelling went away; and in twelve or fifteen days the lip healed up, though with a considerable contraction by the great loss of substance.

CASE LX.

Of an Emphysema.

JOHN RIGBY, an invalid of Plymouth garrison, aged about 60 years, of a healthy constitution, and rather of a lax than rigid habit, on the 18th of May was coming down from the banquettes, when his foot gave way, and he fell with the whole weight of his body upon the spiked points of the palisades. Not being able to raise himself from thence, with the assistance of a soldier close by, he was immediately taken off, and with very little help walked to his barrack. The surgeon being sent for presently after the accident, found no wound but a slight scratch, made by the point of the palisade, with little or no straitness or inflammation. On examining the part, one of the ribs of the left-side was found fractured; and, on pressing gently, a small emphysematous tumour was perceived upon the part, about the size of a crown-piece.

On the least motion, he breathed with pain and difficulty. He was immediately bled pretty freely. The part was embrocated with spirits and vinegar; and a plaister, compress, and bandage, applied. He had an opening mixture, which in the evening procured him two or three motions.

About six o'clock the same evening, the patient was in much pain; his body, and one side of his face, much swelled; and the plaister and bandage being removed, the progress of the emphysema was astonishing. It had spread itself over both breasts, all along the left-side, backward to the spine down to the very extremity of it, all along the neck and face; particularly on the side on which he had laid, so that the right eye-lids were much inflated, and the eye entirely closed up.

A longitudinal incision was now made of about

about an inch and a half above the fracture, where the swelling appeared most prominent. The air immediately rushed out with noise and violence; and even a considerable time afterwards, by stroking and pressing the parts all around towards the opening, it continued to pass off with a piping, crackling noise. He was very soon most sensibly relieved by the operation, and could breathe and swallow pretty freely, which he could not do before without pain and difficulty.

The same gentle efforts were persevered in for near an hour and a half, by which the swelling in every part was greatly reduced, and the right-eye perfectly freed and opened. After dressing the part superficially, a large compress, dipped in spirits and vinegar, with a long flannel bandage, was applied pretty tight round the whole trunk. He had an intense thirst, and was teased with a cough, which on the least motion raised the pain in his side. For the first, he drank plentifully of barley-water with lemon juice; and for the latter, he took an oily emulsion, with the pargoric elixir and syrup of poppies.

About nine, he breathed more freely, but the difficulty in swallowing was much increased. He was now restless and feverish; part of the bed-cloaths was removed, and he was bled a second time, which sensibly relieved the difficulty in swallowing. As the swelling had not advanced, there was at this time no necessity either for removing the bandage, or for more incisions; but orders were left to take off the bandage, and to stroke the parts if the swelling, pain, or difficulty of breathing, should increase any time in the night. At three or four o'clock in the morning, he became very uneasy; the swelling increased, and consequently the breast became too much confined by the stricture of the bandage; which being removed, and the parts again

stroked towards the orifice, a large quantity of air was evacuated. After this, he was again sensibly relieved, and slept some hours in a posture between sitting and lying.

About ten the next morning, he was much cooler, his pulse more moderate and regular, his thirst greatly abated, and his respiration free. On removing the bandage, though the swelling was not much increased on the injured part, yet it had extended itself all along the right-side, and down below the elbow of the right-arm particularly; which, on pressing, made a considerable crackling noise, so that it might be heard all over the room.

The next day, the emphysema had affected the groins and the upper part of the scrotum, but in every other place seemed at a stand: from this time the emphysema gradually subsided in all parts of the body, so that no more incisions were thought necessary. Whenever he coughed, he could hear the air fly off with a bubbling noise from the orifice. During the whole progress of the emphysema, though the cough had been frequently troublesome, he expectorated very little, and what came up was not in the least tinged with blood.

In all the parts which the emphysema had possessed, as the swelling subsided, he complained much of soreness, though he could suffer the parts where the swelling still remained for several days afterwards, to be stroked and pressed without pain. Five or six days from the time of the accident, he was able to rise and walk in his room; and with some nitrous medicines, and his oily emulsion once or twice repeated, in ten or twelve days he was pretty well recovered; a little pain on the part excepted, which he felt a considerable time afterwards on coughing, or any quick motion. In less than a month he was able to do duty.

CASE

CASE LXI.

Of a Tumour, or Wen on the Cheek.

A Man, who was now about 54 years of age, had observed, when he was about 27, a little hard swelling in the muscle of the lower jaw, on the left-side, without any hurt or visible cause: at first, it went on slowly, but afterwards more rapidly; and the older it grew, it still came on the faster, till it became of a prodigious bulk and weight. From the first appearance of this tumour to it's total extraction, about twenty-seven years intervened. The patient had excessive pains and uneasiness in it, and at last it mightily weakened him, though otherwise a strong, robust man.

This excrescence was of the natural colour of the skin, of a glandulous substance, with several large blood-vessels in it, and had hair growing on it as on the other parts of the body. It was almost round, and very hard, and as sensible as the flesh of any other part; for as he was working in the fields, he accidentally made a large gash or wound in it with a sharp iron, which proved very painful; but being cured by a surgeon after the manner of an ordinary wound, it still retained the scar.

This excrescence having grown so big, was attached to the muscles under the left-eye, to the ear and it's muscles, and to the muscles of the lower jaw: on account of it's bulk and weight, it could not hang down freely without some support; it therefore rested upon the top of the shoulder, in which it made a considerable impression. It was also supported by the man's hand in the day-time, and laid on a pillow in the night.

Three or four days before this tumour was taken out, the patient observed it begin to mortify at the lower end, which made him so uneasy, that he took a knife and cut off a good part of it. This occasioned a great hæmorrhage, so that he reckoned

he lost four pounds of blood before it could be stopped. The patient, after so much pain, at last applied himself to a surgeon of the neighbourhood, who made a total extirpation, in the following manner. He made a close ligature, taking in the basis of the excrescence, and all the loose skin; and contracting it as much as possible, he cut it entirely off with a sharp razor. There gushed out of the excrescence, after it was cut off and lay on the ground, as near as could be conjectured, two pounds of blood, for it was nourished by several large blood-vessels, perhaps by some branches of the carotid artery much enlarged, and other blood-vessels from the ear, the muscles of the eye, and lower jaw above mentioned. Three months after the taking away of the tumour, the surgeon having cut off about a quarter of an inch broad of it's basis, found therein four large blood-vessels; the basis, as it appeared at that time, was five inches in diameter, which seemed too large for the whole side of the face; so that, after the operation, the surgeon supposed the loose skin was turned backwards, which might make the basis appear so broad.

After all this loss of blood, the excrescence weighed full nineteen pounds; so that, before the patient's own incision and this operation, it must have been several pounds heavier, which is a most prodigious weight to hang on such a place. This tumour was of a spheroidical figure, and measured thirty-four inches about, by the longest way, and twenty-eight by the broadest.

The hæmorrhage, which was considerable, was stopped by the vitriolic powders and other astringents, and the ordinary dressing was used; so that this great cure was compleated in six weeks time, and the patient entirely recovered. The lower lid of the patient's left-eye continued depressed a little, as did the same side of the mouth, which was occasioned by the great weight hanging on that side of the face. The head

had at first, after cutting the tumour, inclined much to the right-side, owing to the removal of the great weight on the left-cheek; but after the patient perfectly recovered, it began to stand upright. Though the skin, and even a great deal of the muscular part of the cheek and lower jaw, were cut away, yet they grew up again, and were of the ordinary colour of the skin, and like the other side of the face; so that the hair grew on that side of the face as well as on the other, which he commonly shaved: and this was as surprizing as any thing in this whole case.

C A S E LXII.

Of Convulsions cured by Musk.

A Young lady, of a sprightly disposition, in the 17th year of her age, happening, the beginning of January, to be at the Salop Infirmary, was induced, out of curiosity, together with three other young ladies of her acquaintance, to receive the electrical shock. They joined hands, and received a slight stroke from a charged phial of eight ounces. No other than the usual effects were observed at that time; but three hours after, Miss — felt two or three shocks, accompanied with the same sensation, and in all respects similar to those she had received from the phial, except that they were by no means so strong.

These very slight convulsions recurred once or twice a day; no particular periods were observed, and sometimes a whole day intervened between each fit. They were not particularly taken notice of until the beginning of March, when they were observed by her father, who imputed them to an ill habit which she had by some means or other acquired.

From this time her convulsions gradually became stronger; and in the beginning of April, her father being informed of the supposed cause of them, desired a physician to attend her.

The first passage being previously cleansed, she was put on a course of medicine, consisting of foetid gums, with castor and oil of amber, in the form of pills, which were washed down with draughts containing ten grains of musk and sixty drops of the volatile tincture of valerian. The disease increased fast; opium, and likewise Frobenius's æther, both internally and externally, as many antispasmodics as could be thought of, with blisters, &c. were tried, but in vain. The bark, steel, and valerian, together with the cold bath, were of no service. In the beginning of May, her convulsions had increased to such a degree, that her physician grew apprehensive of her being taken off in one of them. Her fits always began with a disagreeable, rather than painful sensation at her stomach; almost at the same instant her mouth and all her features became distorted. Her head was suddenly and violently drawn down to her breast, as in the *emprosthotonos*; and the next moment backward, as in the *opisthotonos*. Her legs, arms, and, in short, every muscle of her body, at one time or other of the fit, seemed to be violently agitated, and became spasmodically contracted.

Her paroxysm used to continue ten or fifteen minutes; at the decline of which, as if nature was quite exhausted or overpowered, her muscles became at once relaxed, and she fell into an hystERIC fit of crying, which was succeeded by a comfortable sleep.

She generally awoke faintish and low-spirited, complaining much of great soreness, especially of her breast and stomach, the effects of the violent spasms. Her pulse was at all times small; the periodical evacuations went on regularly, both as to time and to quantity, and the urine was generally pale. These fits returned, for the most part, three or four times a day, though she sometimes escaped them two or three days together. They were more frequent

and more severe when the weather was damp and the barometer low.

Having unsuccessfully tried such things as were thought most likely to relieve; having observed the disease gradually to increase, and finding it at length at such a height as threatened the life of the unhappy patient, her physician determined to try very large quantities of musk; and experience having taught, that this drug might be given to great advantage in much larger doses than it is generally prescribed, he ordered half a dram to be taken every four hours in the form of a bolus, and to be washed down with a volatile julep. It was highly pleasing, as well as surprizing, to observe the good effects of this medicine: it was no sooner in her stomach, than the fit (at the beginning of which the first dose was taken) began to abate, and in a minute or two entirely went off. The three or four succeeding ones were very slight, and in four days she was entirely free from them. She now began to be tired of her bolus, and it was taken but twice a day: in a week more, it was entirely omitted. She continued perfectly well for upwards of a month, during which time she took a bitter tincture of the bark, and had recourse to the cold bath. Her disease then returned, but with much less violence than before, and it was again removed by the musk. She relapsed three or four different times, and was as often recovered by the same medicine. After this, she enjoyed an uninterrupted state of health for near three years, when the concern occasioned by the death of a tender and affectionate mother brought on her old complaint; it was, however, removed as usual, though not in less than a week's time; yet her spasms abated from the beginning. She continued from this time to have very slight attacks once in a fortnight or three weeks, but they always gave way to the musk, which she took care should be in readiness.

Near the end of five years from the first seizure, she went to Bath. During the first month of her drinking the waters, she continued to have frequent, though very slight, attacks of her disease. In the beginning of December she began to bathe. The day succeeding that on which she first bathed, she was seized with one of the most severe fits she ever had; but, as usual, it was soon removed by the musk. From that time she remained free from complaints. She continued to bathe and drink the waters, and she returned home in perfect health.

CASE LXIII.

Of a Boy who lived some Time without Food.

FEBRUARY the 3d, a lad, about fifteen years of age, fell sick, and complained of pains all over his body; and towards the latter end of the month he was seized with a violent fever, in which he continued for three weeks, and then recovered.

The beginning of April following he relapsed again, his fever continuing for three weeks; and during that fever he had a shaking in his body, as if he had been paralytic.

On the 10th of June following he relapsed a third time, when he became dumb, lost his appetite entirely, and the use of his limbs, and continued without eating or drinking, though all means were used to make him do both: but he recovered of his fever on May 17, in the following year; yet he still continued dumb, and without either eating or drinking, or having the use of his limbs, till the 10th of June, in this second year, when he was again seized with an extraordinary fever; and the next day he recovered his speech, but continued in the fever, without either eating or drinking, or having the use of any of his limbs, till the 11th of November following, when he recovered his health pretty well, and the strength

strength of one of his legs: and thus he continued, without either eating or drinking, only washing his mouth sometimes with water; and when he saw the rest of the family taking their meals, it always gave him great uneasiness, and he commonly retired.

On the 10th of June, in the third year, he had a fever again, which continued till the beginning of September after, when he recovered of the fever, though he never could be prevailed on to take any kind of meat or drink; and thus he continued in pretty good health, and fresh-coloured, till the 7th of June in the fourth year, when he was again taken with a severe fever; and on the 10th, at night, the patient's father pressed him extremely to take a little milk boiled with oatmeal, which at length he agreed to, and he took a spoonful of it, which stuck so long in his throat, that his parents thought he had been choaked; and ever after he took a little food, but so very little, that a halfpenny loaf served him eight days. All the time he fasted he never had any evacuation by stool or urine; and it was fourteen or fifteen days after he began to eat before he voided either. He continued in pretty good health, but wanted the use of his legs.

CASE LXIV.

Of uncommon Nervous Symptoms in a Girl of Thirteen.

MISS J—— M——, a girl just turned of thirteen years of age, of a strong habit, lively disposition, and all her life healthy, though of a pale complexion, was twice, at some distance of time, seized with a sense of strangulation about her throat, and faintness. These symptoms were so slight as scarce to have deserved notice, had they not been succeeded by the following disorder:

On the 15th of July she dined on cold beef, eat near a large cucumber, and drank after it a great glass of cold water, which

was her ordinary drink. She was immediately after seized with a giddiness, and that succeeded by a sickness at her stomach, which lasted all night. The next morning, as her complaint continued, she was vomited with *ipecacuanha*; which, however, did not relieve her.

On the 17th, her right-hand and arm began to shake involuntarily, and her sickness went off; but she had no appetite for animal food. The shaking increased surprisingly, her hand and elbow moving alternately almost six inches from her side, and extremely quick; and this when she was asleep, as well as awake. The motion was so strong, that it was difficult for any person to hold her arm still with one hand; and, as soon as it was confined, the other arm and hand were seized with the same motion, and continued to move till the arm first affected was let go, when it immediately returned to that again, and the other was still. This experiment was carried yet farther: after confining the first, the motion, as has been said, went into the other arm; that also was confined, and the motion went into her legs and thighs; they also were confined, and her whole body fell a moving. It is very remarkable that, upon confining the arm first affected, she was seized with a qualm, which went off with a start, and instantaneously the other arm began to move. This interval was very short; for from the time that the motion of the first arm seized was entirely stopped till the other began to move, was not above three seconds of time, and sometimes not half a second. This experiment was repeated several times with the same success.

In this way the patient continued above a fortnight, the motion being perpetual when asleep, as well as when awake. She slept well, and her appetite, except for animal food, was not amiss. In the mean time, remedies were not omitted, and she was visited at times by no less than four eminent

eminent physicians. Being naturally costive, she was purged several times; with *tinctura sacra*, one ounce and a half; and tincture of black hellebore, half a dram; and in the intervals took a bolus, with ten grains of camphire, twice a day. She thought the camphire in substance made her sick; so it was dissolved in a little spirit of wine and vinegar, and given in a draught with some simple-water. Her arm was rubbed with a flesh-brush, embrocated with the volatile liniment, and at last blistered, but all to no purpose.

On the 29th of July, her disease put on another shape. About ten o'clock in the morning, as she was getting up, she was taken with a fainting-fit, which lasted above half an hour. At this time a fire broke out within two or three doors of the house where she lived, and all the neighbourhood was in an uproar. When she recovered a little out of the fit, but before she came to her right senses, she was so much alarmed at seeing her aunt, with whom she lived, in tears, that she ran about the house in the utmost distraction. Her physician had been sent for on her first seizure, and came immediately. By this time the fire was increased, the house was in a blaze, and that where the patient was, full of people assisting, or ready to assist, in moving the goods. He found the poor girl in strong convulsions, so that two people could scarcely hold her. The fire was soon extinguished; but the poor patient continued in fits the whole night, being seldom an hour and a half free, and for the most part not a quarter of an hour.

The fits grew stronger and stronger for the first three or four days, and at last it was as much as three people could do to keep her in bed: she was even mischievous, and endeavoured to strike and bite every body near her, though naturally of a sweet and affectionate disposition. In order to prevent her hurting herself or others, her friends were obliged to have a waist-

coat for her, such as is used for mad people; without which it would have been impossible to have managed her. For some days, the intervals were very short, and she was even then scarce thoroughly sensible. But afterwards, she recovered her senses in the intervals, and told when the fits were coming on; so that the people about her prepared accordingly, by securing her hands by means of the long sleeves of the waistcoat, and by tying her knees together with a napkin.

This stage of the disease lasted a fortnight, and the fits proceeded in this manner. She was first seized with a faintness, her eyes closed, and she continued so through the whole paroxysm. She sighed, groaned, and made several odd noises: she struggled violently, throwing about her arms, legs, head, and body, with amazing strength. She foamed at the mouth, and spit: then she would lie still, without motion or respiration, for above a minute. A looking-glass was several times put to her mouth whilst she was in this state, and there was not the slightest speck to be seen on it. Her pulse too, at this time, was not perceptible: after this, she fetched a deep sigh, and began to struggle afresh. The struggling grew weaker by degrees, till she came quite out of the fit. When she had been in this way for about eight days, the intervals became longer; and the moment the fit was over, she got up and sat in a chair till another came, when she was lifted into bed again.

Towards the last, every fit seemed to be divided into three acts, if they may be so described; for she lay still twice in the way already mentioned, and constantly came out of them in the following manner. She first drew up her eye-brows, as if wanting to open her eyes; then slowly and deliberately bringing up her left-hand towards her right-eye, till her finger and thumb touched the eye-lid, she pinched up the skin a little, and drew back her hand with
a jerk,

a jerk, as if she wanted to pull out a hair. She repeated the same action to the other eye-lid; and then opening her eyes, she turned her head every way with great quickness, and darted her eyes from one side to another, to every corner of the room, and under the table, like one in the utmost fright and astonishment. But she was never sensible that she did this, nor that she brought her finger and thumb to pinch her eye-lids. This uniform appearance continued for the last five or six days, when the fits were so weak, that she was managed, as she sat in her chair, by one person or two. In all this time she took very little nourishment, till towards the last; so that she was thin, pale, and weak. What sleep she had was the effect of opiates, thirty drops of liquid laudanum being her usual dose. At all times when the fits were off, her hand and arm moved as before.

The fits were at first so violent, that she could not be bled on account of her struggling; and as they weakened, this operation was not judged necessary. Her head was shaved and blistered; and on the 3d of August, when we could get her to swallow medicines, the following were ordered.

Take the best Russian castor powdered, and cinnabar of antimony; of each twelve grains—of syrup of saffron, enough to make a bolus. To be taken every six hours, drinking after it four spoonfuls of the following mixture.

Take of camphire, half a dram—of honey, a sufficient quantity to dissolve the camphire—of simple penny-royal water, six ounces. Strain the mixture, and add syrup of saffron, and tincture of saffron, of each three drams.

She continued the use of these medicines, as directed, for two days, and afterwards twice a day for above a week.

On the 12th of August, the fits, which had been gradually weakening, left her en-

tirely. The shaking of the arm, though not near so violent, continued; but another grievous symptom supervened, she totally lost the use of her legs. Her feet were absolutely without all feeling, so as not to be sensible when touched, pinched, or bruised. This want of sensation extended half way up her legs. Her appetite returned; she recovered her flesh, and ran about on her knees with surprizing agility, for she was of a lively, stirring disposition. In order to remove this complaint, every application was made, and every experiment that could be thought of was tried. Her legs and feet were strongly rubbed with a flesh-brush for some time. The tepid bath, and acrid applications, so as at last even to raise blisters, were not omitted. For some days the cold bath was used; but she was always chilly and sick after it, so that it was not persevered in. But the friction and volatile stimulating applications were continued, viz. the flesh-brush, the volatile liniment, and bruised mustard-seed. The beginning of October, she first complained of a little pain or smarting from the sinapism (which had been repeated by intervals) in one of her great toes, and by degrees she recovered the sense and motion of her limbs. She learned to walk like a child, catching hold of every thing near her, or supporting herself betwixt two people: soon after, she could walk with a single prop, but it was some time before she trusted herself alone. About the middle of this month (October) she could walk perfectly well; and there only remained, of all her complaints, a slight motion of her arm and hand, which went off in the following manner. On the 20th of the same month, having suffered extremely from the cold in seeing the Lord Mayor's Shew, she was seized with a pain in the shoulder of the moving arm: this increased; and when she came home, grew extremely uneasy. That night, as she was sitting by the fire, the arm all at once was raised upwards with a jerk and great pain,

and the hand fixed upon the top of the shoulder, where it remained immoveable. Her aunt, who sat by her, attempted to bring it down, but to no purpose, the parts being all rigid; but after a good deal of friction, and bathing with camphorated spirits of wine, the muscles relaxed, the arm came down, and the involuntary motion ceased. From that day she enjoyed good health, was free from all her complaints, except that sometimes, on any great motion or sudden fright, she had a little agitation in her arm, which soon went off. It may not, perhaps, be amiss to observe, that she had never had any appearance of the female periodical discharges.

CASE LXV.

A second Infection of the Small-Pox.

A Young gentleman, ill of that sort of small-pox which is called the coherent, or intermediate between the distinct and confluent kind, on Wednesday the 3d of October, being the sixth day from the eruption, grew delirious in the night, and got out of bed in spite of two nurses who attended him; and seizing one of them by the neck between his bare arms, he pressed his forehead, then covered with the small-pox in the state of maturation, against her naked breast, and held her for some time in that posture: she was heated by striving with him; and in struggling to get loose, she was sensible that she bruised and broke some of the pustules with her forehead. This woman was about forty years of age, of a clear, florid, sanguine complexion; she told the doctor she had had the small-pox when about seven or eight years of age, and had been pretty full of them, though she bore no marks. On Friday morning the small-pox began to appear upon her forehead, and increased by degrees to between fifty and sixty; she had likewise a few pustules on the back part and sides of her neck, where the patient had grasped her

with his naked arms, but had none, as she told the doctor, on any other part of her body; the lower part of her face was entirely clear of them, and those upon her forehead were chiefly confined to the middle and most prominent part of it, which had been pressed against the patient's breast. They rose gradually, and came to maturity, in the same manner as the small-pox of the middle coherent kind, with a great inflammation and swelling of her forehead, and the adjoining part of her face, especially between the eye-brows, where a small cluster of the pustules were seated; and on the 9th of October, her right-eye was quite closed up, and the left almost in the same condition: but all this time she had no fever, sickness, or other symptom of the small-pox, beside this eruption, and the inflammation and pain that attended it. That night she had a blister applied to her neck; in consequence of which she recovered the sight of her eye the next day, being the sixth from the eruption, when the pustules were turning and beginning to scab. The scabs agreed with those of the milder coherent sort in their appearance and duration. The doctor saw her several times after this, particularly on Monday the 22d of October, which was the eighteenth day from the eruption of the pustules, when she had still some part of the scabs remaining on her forehead.

CASE LXVI.

Of the Effect of Mezercen in removing Venereal Nodes.

THOMAS DUFF, drummer in the thirteenth regiment, aged about thirty years, was admitted into George's Ward, in St. Thomas's Hospital, on the 24th of April 1766.

The account he gave of his complaints was, that he contracted the venereal disease about the latter end of the year 1764, and had a bubo opened in his groin in January

nuary 1765; but that, by the use of mercurial medicines, though without salivation, his complaints were removed; and he remained apparently well till the June following, when, after a long fatiguing march, he complained of an excruciating head-ach, and chiefly in the night; soon after this, a swelling appeared upon the cheek-bone, under the right-eye, and his head-ach somewhat abated: about two months after, another tumour of the same kind appeared over the left orbit; several others in a little time were found upon the skull; and about three weeks before his admission, he had observed a considerable tumour on the left shin-bone: he had taken many medicines, but the swellings still grew larger, and his strength decreased daily.

The following is an account of the state in which he was found upon his admission to the hospital, viz. one large tumour, about the size of half a small orange, in the middle of the front of his head; and on each side of it was another, about the size of half a walnut: on the side of his head were two other tumours; one the size of half a pullet's egg, the other somewhat smaller: all these were of the natural colour of the skin, and not painful to the touch. The large one felt somewhat soft in the middle, as did also one of those upon the side; the others were hard. Upon the rising of the right cheek-bone, near the orbit, was a tumour, the size of a walnut; and over the left orbit was another similar to it; the teguments over these last were somewhat red and enflamed; and, upon examination, it was the opinion of some that they contained a fluid. The node on the left-shin was near the middle of the bone, about three inches long, rose considerably, and was as hard to the touch as any other part of the bone.

To this must be added, that the man was greatly emaciated, and so much weakened, that he could hardly walk; that his pulse was lower and quicker than natural, and

that he was much troubled with nocturnal pains.

Under all these unpromising symptoms, he began the use of the decoction of mezercon on the 26th of April 1766. By the 20th of May the tumours were all diminished, and his pains were somewhat abated. Upon examining his head, a new tumour was discovered towards the back part, about the size of half a large walnut, which felt as if it contained a fluid.

On the 3d of June he was directed to drink daily one pint and a half of the decoction; and about this time a small pimple appeared on the tumour over the left-eye, which came to discharge some thin matter, but not in such a quantity as could be supposed sufficient to evacuate the contents of the tumour; and in a few days this little sore dried up without any dressing.

On the 17th of June, half a spoonful of the solution of sublimate was mixed with his daily quantity of the decoction; but having caught cold, and complaining of a pain in his breast, it was continued but two days.

By the beginning of July he had much recovered his strength and flesh, and he looked more healthy; the state of the tumours was then as follows: that on the shin, those near the orbits, the two small ones on the fore part of the head, the lower one on the side, and that on the back part, were all so reduced as scarcely to be felt. The large node on the fore part of the head, and that near the crown, did not exceed one-half of their former height; yet their bases were as at first, and they felt as if they contained a fluid. His pains were much lessened, but were not entirely gone.

During this time no external application had been used, nor any internal medicine taken, except what has been mentioned; but now he was directed to take one spoonful of the solution of sublimate twice a day, with the decoction of mezercon.

On the 15th of July, the large node on the fore part of the head was opened; it contained no fluid, but the pericranium and the integuments were much diseased, and the bone was carious: hereupon it was found necessary to remove the integuments, and lay the whole extent of the carious bone bare for exfoliation.

The node upon the crown was opened in the same manner a few days after, and the bone was found carious as in the other.

No vestige now remained of any of the other tumours; but the patient was ordered to continue the two pints of the decoction of mezercon, with two spoonfuls of the sublimate solution, daily; and as he seemed well in health, he was suffered to go abroad.

About the latter end of September, an exfoliation was obtained from that node which was opened near the crown; and the other upon the fore part of the head seemed in a fair way, so that he took still greater liberties as to going abroad, and his medicines were but seldom taken for these few last weeks; which was, however, disregarded, as he seemed so well, till towards the end of October, when he complained of a pain in his arm: this he had sometimes done before upon change of weather; but as he had had a rheumatic pain in his knee, which gave way to a blister, and a few doses of Dover's sweating powder, it was looked upon to be of the same kind.

The arm was now examined, and a thickening of the higher arm-bone, a little above the middle, was very observable; it extended quite round the bone, and seemed like an overgrown callus, but was larger at the anterior and posterior parts than at the sides; it gave him no pain upon pressure, but for above a week had been very painful in the night: as he had never himself observed any tumour, it is not possible to ascertain how long it had been there.

He was now ordered the decoction made with double the proportion of mezercon root, but his stomach would not bear it; so

he was desired to drink three pints in a day of the usual decoction.

On the 11th of November, the tumour on the arm was lessened; a small quantity of the strong mercurial ointment was ordered to be rubbed upon the affected arm every night, and his decoction continued: this, in a few days, affected his mouth, and brought on a spitting, which was encouraged by the continuance of the same small quantity of mercurial ointment, with some few intermissions, for a month, continuing the decoction to two pints daily during the whole time.

The pain in the arm went off a few days after he began to spit, and the node on the arm was gone in about three weeks.

On the 24th of December, an exfoliation cast off from the fore part of the head, and the man remained in perfect good health, excepting the fore.

CASE LXVII.

Of a scirrhus Humour in the Breast.

A Surgeon being sent for to a gentlewoman at Lewes, in Suffex, who had been brought very low by a fever, which from her cough, sharp pain under her breast, and other symptoms, was judged pleuretic; but upon a discharge from her breast of a thin whey-like matter, or gleet, all the symptoms vanished. When the surgeon saw her first, the liquor was discharged by a small pin-hole near the nipple, and was little more than would have wetted a handkerchief four times doubled. Upon examining the breast, he found a large tumour, which lay deep, yielding to his fingers, and pitting like dough. He searched the abscess with his probe, and twisted out with it a matter like saw-dust, or bran mixed with hair. Upon laying open the breast, he separated a tumour in a cyst or bag, which weighed eight ounces, and contained a solid matter like that above mentioned, mixed with a substance resembling hair. Upon enquiring

enquiring into the rise of this tumour, the patient told him that, thirty-eight years before, she had received a contusion in that breast by a fall from a horse, which was attended with great pain and fluxion, so that the veins of her breast appeared knotty and distended as in a cancer; but her pain ceasing, they sunk, and left an indolent tumour in her breast, supposed by her surgeon to be a true schirrhus; since which time it always continued nearly in the same state, without pain, encreasing very little in bulk, but obstructed in such a manner, that she could not nurse her children with that breast.

C A S E LXVIII.

Of a Man who was killed by swallowing melted Lead.

ON Thursday, the 4th of December, 1755, at three in the afternoon, Henry Hall, of East Stonehouse, near Plymouth, aged ninety-four years, of a good constitution, and extremely active for one of that age, being one of the three unfortunate men who suffered by the fire at the light-house at Eddystone, nine miles from Plymouth, having been greatly hurt by that accident, with much difficulty returned to his own home; and a surgeon being sent for to his assistance, found him in his bed, complaining of extreme pains all over his body, especially in his left-side, below the short ribs, in the breast, mouth, and throat. He said likewise, as well as he could, with a hoarse voice scarce to be heard, that melted lead had run down his throat into his body.

Having taken the proper care of his right-leg, which was much bruised and cut on the skin, the surgeon examined his body, and found it all covered with livid spots and blisters, and the left-side of the head and face, with the eye, extremely burnt; which having washed with linnen dipped in an emollient fomentation, and having

applied things used in cases of burning, he then inspected his throat, the root of his tongue, and the parts contiguous, such as the uvula, tonsils, &c. which were greatly scorched by the melted lead. Upon this he ordered him to drink frequently of water-gruel, or some such draught; and returning to his house, sent him the oily mixture, of which he took often two or three spoonfuls.

The next day he was much worse, all the symptoms of his case being heightened, with a weak pulse, and he could now scarce swallow at all.

The day following there was no change, except that, on account of his too great costiveness, he took six drams of manna, dissolved in an ounce and a half of infusion of fenna, which had no effect till the day following, when, just as a clyster was going to be administered, he had a very foetid discharge by stool.

That day he was better till night, when he grew very feverish.

The next day (having slept well the preceding night, and thrown up, by coughing, a little matter) he was much better.

He began now to speak with less difficulty, and for three or four days to recover gradually; but then suddenly grew worse, his pulse being very weak: his side, which grew worse daily from the first, now reddened a little, and swelled, to which a plaister of gums was applied: but all methods proved ineffectual; for the next day, being seized with cold sweats, and spasms in the tendons, he soon expired.

Examining the body, and making an incision through the left-side of the belly, the surgeon found the diaphragmatic upper mouth of the stomach greatly inflamed and ulcerated, and the coat in the lower part of the stomach burnt; and from the great cavity of it he took out a large piece of lead, which weighed exactly seven ounces, five drams, and eighteen grains.

It will, perhaps, be thought difficult to explain the manner by which the lead entered

entered the stomach. But the account which the deceased gave was, that as he was endeavouring to extinguish the flames, which were at a considerable height over his head, the lead of the lanthorn being melted, dropped down, before he was aware of it, with great force into his mouth, then lifted up and open; and that in such a quantity, as to cover not only his face, but all his cloaths.

CASE LXIX.

Of a Boy who never made Water.

JOHN WORSNAPE, a poor boy at North Bierley, Yorkshire, lived till he was 17 years old, and never made water, and yet was in perfect health, vigorous, and active. He had constantly a diarrhoea upon him, but without much uneasiness. The obstruction must have been in his kidneys, for he had never any inclination to make water. He died of a fever, the causes of which appeared to be very remote from this obstruction.

CASE LXX.

Of some extraordinary Effects of a checked Salivation.

A Girl of 17 years old, born of reputable parents, in the parish of Deptford, in Kent, of a healthy constitution, and inclining to be fat, had never had any considerable illness, excepting the small-pox, till July 1754, when she caught a great cold, which at first caused only a swelling of the glands about the throat, and a violent tooth-ache, which was soon removed upon drawing two teeth; at which operation, however, she was greatly terrified: soon after this, she was seized with a drowsiness, and such a numbness in her legs and feet, that it was painful for her to walk. After having tried several remedies, but to no purpose, she came to the London Hospital, where she was admitted an out-patient

in the beginning of August following, and was cured in a little time of the numbness and drowsiness; but as the glands continued swollen, she was ordered to take a few mercurial pills, and likewise some purgatives, at proper intervals, in order to prevent a salivation; but unfortunately she neglected taking the purgatives, and was otherwise wanting in a proper care of herself, by which, in about a week's time, she was thrown into a gentle salivation. This happened on the 2d of September: upon this, her friends confined her to her bed; but being one day extremely thirsty, and her mouth very hot and dry, she got up in her shift, though in a profuse sweat, in order to look for something cold to drink; when finding nothing but some red wine, she took a hearty draught of it: this was no sooner down, than she found it lay very cold on her stomach, and immediately felt a pain an inch to the right of the seat of the heart; and from that instant her salivation ceased. However, she felt no bad effect from it till near a week after, when she began to spit up her victuals, by a little at a time; which in four days changed to a gentle vomiting, and kept increasing to such a degree, that in a few days more she could absolutely keep nothing upon her stomach, throwing up immediately whatever she took. In this situation she continued almost two months before she applied to the London Hospital, where she was received into the house on the 10th of December 1754. But as she was very sensible that she had not followed the directions given her, and that through her own misconduct she had brought a considerable part, if not the whole, of this disorder upon herself, she concealed her having been in a salivation, and every circumstance, either attending or subsequent to it, professing herself entirely ignorant of what might be the cause of her complaint: upon this, she was treated in the manner which appeared most suitable to her case. She was first blooded,

blooded, and then had a gentle vomit given her; after which she took a pleasant cordial with some laudanum in it: the vomit was repeated the two following days, and the opiate increased every day in the cordial; but they all came up so equally fast, that it would have been impossible, from the operation, to determine which was the cordial draught, and which was the emetic. After this, some soft, relaxing, lubricating purges, and oily emulsions, were ordered to be taken in the smallest quantities at a time, while warm fomentations, or soft cataplasms, were applied to the stomach and bowels, and emollient oily clysters were thrown up: during this course she went also four times to the warm bath, but all to no purpose; her pain in the pit of the stomach, though never very violent, yet still continued fixed in the same manner, and her vomiting was not in the least diminished. As the soft relaxing method did not answer, warmer applications were used externally; and the richest cordials, as well as the warmest stomachics of every kind, were given her, but with as little success; and however small the quantity she took, it came up almost the very instant it was swallowed: thus, twenty drops of laudanum, one dram of crude mercury, or one single grain of opium, or whatever might be given her, was vomited up immediately.

It is very remarkable that the probang, which was often introduced into the stomach, did not seem to meet with any resistance in it's way, or about the orifice of it; and that yet nothing of what she vomited was frothy, or mixed with any humour of the stomach, had any of that smell peculiar to vomitings, or was altered in any respect. She had always been extremely regular in her periodical evacuations ever since she was fourteen years old; and even a fortnight after her vomitings took her, she had a small shew of them: her skin was extremely dry; and even after the warm bath, there was never the least appearance

of any perspiration: her stools ceased immediately upon her being taken with these vomitings, but she made, once in ten or twelve days, an ounce, or rather more, of a very high-coloured urine. This, and indeed her keeping alive all this while, shewed that a considerable part of the liquids she took was immediately absorbed by the veins of the mouth and gullet, which, in her situation, might very naturally be supposed extremely thirsty; and though she seemed to vomit up the whole of what she swallowed, and was greatly fatigued with it, yet she constantly said she found herself strengthened by eating broth or spoon-meats; not but she wasted every day more and more, so as now to be scarce able to walk or stand. In this condition it was thought adviseable that she should take a clyster twice a day, made of near a pint of strong mutton-broth, with the yolk of an egg dissolved in each: after this had been repeated for three days, and was found to be totally absorbed, so that not the least part of it came away, she was desired to abstain from swallowing any thing for one week at least, in hopes that the stomach might possibly recover itself by this rest: an hour after each clyster she made almost half a pint of water, which was about half of the clyster, but nothing came away by stool. It is surprising how much, and how fast she mended by this method; in the first ten days her spirits grew better, her strength increased, and her flesh seemed to grow firmer. After she had continued these clysters for a fortnight, during which time she faithfully abstained from swallowing any thing whatever, (for which reason also she had not vomited once, and yet her mouth and throat were no ways dry) it was expected that her disease might be so far overcome, and her stomach so far recovered, that she might now safely venture to swallow some small quantity of liquids, by a little at a time, and which indeed she was very desirous of taking, as she found a heat and irritation from the so frequent

quent introduction of the clyster-pipe; but upon swallowing a spoonful of broth, she was immediately convinced that her stomach still continued in the same unhappy situation, and that there was not the least alteration or amendment in her complaint.

Finding that no manner of advantage had been got over the disorder, which continued equally strong and obstinate; and seeing the perfect absorption of the clysters, it was thought advisable to try once more the effect of medicines, and especially to see, when given that way, what they could produce; and for that reason, having observed in her a total want of perspiration, it did not seem unlikely that, if she could be brought to sweat a little, this affection of the stomach might, in some measure, be removed, if not totally cured; but as, at the same time, this was the only way left to keep her alive, none but the most gentle perspiratives were used; nor indeed, as they did not answer in the least, did it seem prudent to insist upon a long use of them. After this, a small decoction of the bark, with fifteen grains of liquid laudanum, were likewise tried in a clyster; but it ruffled her extremely, and came away very soon; which was the first thing she had voided by stool ever since she had the vomiting.

Thus having continued to try one thing, and then another, from the 12th of December to the 4th of March following, without the least benefit; and finding that this unhappy girl was as far from a cure as the moment she came into the house, the clysters but barely keeping her alive, it was determined to send her out of the house; but first to desire her to relate again, with the greatest exactness, every circumstance preceding her vomiting, since what might perhaps appear trifling to her, might possibly be of the greatest consequence; and, withal, she was given to understand, that unless she could recollect something more than what she had already declared, or could throw some new lights upon her case, it would

be in vain to flatter herself with any hope of amendment, or to attempt any thing farther towards a cure, as every medicine or method had been tried which had the least probability of success. She then begged pardon, and said she had concealed a circumstance, which she was now afraid was a material one; but as she had been much to blame in it, and was constantly in hopes that it would have been of no consequence, she had not dared to mention it for fear of giving offence: and then she told the whole concerning her salivation, and the manner in which it was stopped, as is related above.

Being now possessed of the true cause of her vomiting, it was determined to restore her, if possible, to that state from which she had been so suddenly removed, as it was evident that the mercury, which had begun a salivation, had not been evacuated in any manner, but was still lodged in the body; and for this reason it was thought proper, as the only means left to lay hold of it, to rub in some more, in hopes that it might put that in motion, which was in all appearance the true cause of all this disorder. Accordingly, a dram of the strong mercurial ointment was ordered to be rubbed in upon her legs and thighs, twice a day, for three days: on the fourth day, a gentle salivation began, which had no sooner made it's appearance, than she felt the pain or bar across the stomach abate, and immediately a kind of ease and relaxation followed; upon which she desired a little barley-water to drink, which, to her great and unspeakable satisfaction, did not come up. Not long after, she was tempted, more from curiosity than thirst, to take a hearty draught of it; this likewise staid, and gave her not the least uneasiness. Finding herself thus relieved, she called for some broth, and had some bread put into it; this she relished extremely; and what is surprizing, though she had continued for five months without swallowing any thing that could be supposed

to reach her stomach, yet these things she now took did not cause the least weight or uneasiness when they got down: on the contrary, she continued to eat and drink as the other people in the ward; upon which she recovered her spirits and strength every day more and more, she began to have regular stools, and made water as when in health.

The salivation was continued a little more than a fortnight, and made to lessen by insensible degrees: after it ceased, she felt no uneasiness or inconvenience in any respect; and being perfectly cured of all her complaints, was at length discharged out of the hospital on the 1st of April 1755.

CASE LXXI.

Of extraordinary Symptoms followed by the Small-Pox.

A Lady was seized with the small-pox, which proved to be of the confluent sort; and in the course of this disease, during which she was attended by the late Sir Hans Sloane, several threatening symptoms appeared, which, however, were at length overcome, and the patient, being thought out of danger, took several doses of such purgative medicines as are usually administered in the decline of the disease without any bad consequence.

But in the evening of the day on which she had taken the last dose that was intended to be given her on that occasion, she was suddenly seized with pain and convulsions in the bowels; the pain, and other symptoms, became gradually less violent as the force of the medicine abated; and by such remedies as were thought best adapted to the case, they seemed at length to be entirely subdued.

They were, however, subdued only in appearance; for at eleven o'clock in the forenoon of the next day, they returned with great violence, and continued some

hours: when they went off, they left the muscles of the lower jaw so much relaxed that it fell down, and the chin was supported on the breast. The strength of the patient was so much exhausted during this paroxysm, that she lay near two hours with no other sign of life than a very feeble respiration, which was often so difficult to be discerned, that those about her concluded she was dead.

From this time the fits returned periodically every day at about the same hour. At first they seemed to affect her nearly in the same degree, but at length all the symptoms were aggravated; the convulsions became more general, and her arms were sometimes convulsed alternately; it also frequently happened, that the arm which was last convulsed remained extended and inflexible some hours after the struggles were over. Her neck was often twisted with such violence, that the face looked directly backwards, and the back part of the head was over the breast; the muscles of the countenance were also contracted and writhed with the spasms, so that the features were totally changed, and it was impossible to find any resemblance of her natural aspect by which she could be known. Her feet were not less distorted than her head, for they were twisted almost to dislocation at the instep, so that she could not walk but upon her ancles.

To remove or mitigate these deplorable symptoms, many remedies were tried, and, among others, the cold bath; but either by the natural effect of the bath, or by some mismanagement in the bathing, the unhappy patient first became blind, and soon afterwards deaf and dumb. It is not easy to conceive what could increase the misery of deafness, dumbness, blindness, and frequent paroxysms of excruciating pain: yet a very considerable aggravation was added; for the loss of her sight, her hearing, and her speech, were followed by such a stricture of the muscles of her throat, that

she could not swallow any kind of aliment, either solid or liquid. It might reasonably be supposed that this circumstance, though it added to the degree of her misery, would have shortened it's duration; yet in this condition she continued near three quarters of a year, and during that time was supported in a very uncommon manner, by chewing her food only, which having turned often, and kept long in her mouth, she was obliged at last to spit out. Liquors were likewise gargled about in her mouth for some time, and then returned in the same manner, no part of them having passed the throat by an act of deglutition; so that, whatever was conveyed into the stomach, either of the juices of the solid food, or of the liquids, was either gradually imbibed by the sponginess of the parts which they moistened, or trickled down in a very small quantity along the sides of the vessels.

But there were other peculiarities in the case of this lady yet more extraordinary. During the privation of her sight and hearing, her touch and smell became so exquisite, that she could distinguish the different colours of silk and flowers, and was sensible when any stranger was in the room with her.

After she became blind, deaf, and dumb, it was not easy to contrive any method by which a question could be asked her, and an answer received. This, however, was at last effected, by talking with the fingers, at which she was uncommonly ready. But those who conversed with her in this manner were obliged to express themselves by touching her hand and fingers instead of their own.

A lady, who was nearly related to her, having an apron on that was embroidered with silk of different colours, asked her, in the manner which has been just described, if she could tell what colour it was; and after applying her fingers attentively to the flowers of the embroidery, she replied, that

it was red, blue, and green, which was true; but whether there were any other colours in the apron, the writer of this account does not remember. The same lady having a pink-coloured ribband on her head, and being willing still farther to satisfy her curiosity and her doubts, asked what colour that was. Her cousin, after feeling it some time, answered, that it was a pink colour. This answer was yet more astonishing, because it shewed not only a power of distinguishing different colours, but different kinds of the same colour; the ribband was not only discovered to be red, but the red was discovered to be of the pale kind, called a pink.

This unhappy lady, conscious of her own uncommon infirmities, was extremely unwilling to be seen by strangers, and therefore generally retired to her chamber, where none but those of the family were likely to come. The same relation, who had by the experiment of the apron and ribband discovered the exquisite sensibility of her touch, was soon after convinced, by an accident, that her power of smelling was acute and refined in the same astonishing degree.

Being one day visiting the family, she went up to her cousin's chamber; and after making herself known, she intreated her to go down and sit with her among the rest of the family, assuring her that there was no other person present. To this she at length consented, and went down to the parlour-door; but the moment the door was opened, she turned back, and retired again to her chamber much displeased, alleging that there were strangers in the room, and that an attempt had been made to deceive her. It happened, indeed, that there were strangers in the room, but they had come in while the lady was above stairs, so that she did not know they were there. When she had satisfied her cousin of this particular, she was pacified; and being afterwards asked how she knew there were

were strangers in the room, she answered, by the smell.

But though she could by this sense distinguish in general between persons with whom she was well acquainted and strangers, yet she could not so easily distinguish one of her acquaintance from another, without other assistance. She generally distinguished her friends by feeling their hands; and when they came in, they used to present their hands to her, as a means of making themselves known: the make and warmth of the hand produced, in general, the differences that she distinguished; but sometimes she used to span the wrist and measure the fingers. A lady, with whom she was well acquainted, coming in one very hot day, after having walked a mile, presented her hand as usual: she felt it longer than ordinary, and seemed to doubt whose it was; but after spanning the wrist, and measuring the finger, she said, 'It is Mrs. M. but she is warmer to-day than ever I felt her before.'

To amuse herself in the mournful and perpetual solitude and darkness to which her disorder had reduced her, she used to work much at her needle, and it is remarkable that her needle-work was uncommonly neat and exact: among many other pieces of her work that were preserved in the family, was a pin-cushion, which perhaps could scarce be equalled. She used also sometimes to write, and her writing was yet more extraordinary than her needle-work: it was executed with the same regularity and exactness; the character was very pretty; the lines were all even; and the letters placed at equal distances from each other. But the most astonishing particular of all, with respect to her writing, was, that she could by some means discover when a letter had, by mistake, been omitted, and would place it over that part of the word where it should have been inserted, with a caret under it. It was her custom to sit up in bed at any hour of the

night, either to write or to work, when her pain, or any other cause, kept her awake.

These circumstances were so very extraordinary, that it was long doubted whether she had not some faint remains both of hearing and sight; and many experiments were made to ascertain the matter: some of these experiments she accidentally discovered, and the discovery always threw her into violent convulsions. The thought of being suspected of insincerity, or supposed capable of acting so wicked a part, as to feign infirmities that were not inflicted, was an addition to her misery which she could not bear, and which never failed to produce an agony of mind not less visible than those of her body. A clergyman, who found her one evening at work by a table with a candle upon it, put his hat between her eyes and the candle, in such a manner that it was impossible she could receive any benefit from the light, if she had not been blind. She continued still at her work with great tranquillity, till putting up her hand suddenly to rub her forehead, she struck it against the hat, and discovered what was doing; upon which, she was thrown into violent convulsions, and was not, without great difficulty, recovered. The family were, by these experiments, and by several accidental circumstances, fully convinced that she was totally deaf and blind; particularly by her sitting unconcerned at her work during a dreadful storm of thunder and lightning, though she was then facing the window, and always used to be much terrified under such circumstances. But Sir Hans Sloane, her physician, being still doubtful of the truth of facts which were scarce less than miraculous, he was permitted to satisfy himself by such experiments and observations as he thought proper, the issue of which was, that he pronounced her to be absolutely deaf and blind.

She was at length sent to Bath, where she was in some measure relieved; her convulsions

vulsions being less frequent, and her pains less acute; but she never recovered her speech, her sight, or her hearing, in the least degree.

CASE LXXII.

Of a Diabetes, with unusual Symptoms.

A Lady of great sensibility of temper, and fine genius, rather corpulent than otherwise, though advancing in years, had enjoyed, through the former part of her life, an almost uninterrupted series of good health; till, about six years ago, she felt herself suddenly attacked with a sensation of thirst, hardly tolerable; and this was shortly after attended with a notable wasting away of her healthful corpulency, with great dejection of spirits, a slight pain in both her sides, and with a pricking uneasiness round her waist: however, those complaints were so little regarded for above two years, that she consulted no regular medical adviser all that time; till at length, one day, by some accident, she happened to discover that her urine smelled, and tasted exceedingly sweet, as honey itself, without retaining, in any degree, it's natural urinous flavour. This circumstance quickly alarmed her so much, that she immediately applied to some intelligent person; who finding the quantity of her daily urine also unusually increased, acquainted her that she laboured under a slight degree of the diabetes. After this, she soon found herself incommoded with palpitations and spasmodic twitchings in divers parts, sometimes in her neck, at others in her back, &c. She added, that she remembered the palpitations of her heart were very remarkable from the first. For these complaints a journey to Bristol Wells was recommended, and there she was desired to amuse herself with chearful company, and to drink those waters on the spot: she accordingly complied, and resided there ten weeks; during which, by advice of a physician, she was blooded once, and

took small doses of rhubarb every three or four days, with intent to excite at most two or three stools extraordinary; by which method, before the end of her stay, she gradually became so much better, that she concluded herself perfectly recovered, till just before she had appointed to leave Bristol, that her anxiety about returning to London brought back her thirst, parched tongue, and sweet urine, almost as bad as ever. This circumstance determined her to post away to Bath, where two eminent physicians, in consultation, recommended issues to be made above her knee, thereby meaning to substitute a gradual drain, in lieu of that which nature, some years before, had quite suppressed. These gentlemen farther urged her to drink the Bath waters, so as to give the same a fair trial; and, in compliance with their advice, she staid full five months, living there very quiet and still, and interposing some gentle evacuations by calomel purges; by which method she again gained ground, and only now and then suffered the symptom of uncommon thirst, which occasionally returned, oftener even than her urine became sweetish. Thus she lived, on the whole, not very much incommoded, till about the end of March 1766, when the death of a relation, and more bodily fatigue than ordinary, brought back again the dejection of her spirits, fluttering at her heart, with convulsive catchings all over her, though momentary and irregular, and an universal lassitude of her limbs. In this condition she consulted a new physician; who, on feeling her pulse, found it beat strong and full for seven or eight strokes, but then a sudden stoppage ensued for near half as long an interval as he had counted the pulse before; and thus for several days went on, alternately stopping and renewing, though with considerable variety in the periods of time; and after the long periods of such stoppings, her heart would suddenly beat so loud, that she thought, at the ensuing

fuſing ſtoppage, it had often done making it's laſt effort to puſh on her lazy blood (as ſhe termed it.) The intervals of theſe ſtoppages were very various; for ſome days four, five, fix, ſeven, and once eight ſeconds of a ſtop-watch, (no inconfiderable period, when carefully meaſured) before her pulſe renewed.

Whatever might be the cauſe of this irregularity, the method of cure ſeemed to be plainly taking away a proper quantity of blood; and cupping, in her circumſtances, was judged the fitteſt method of doing this: and afterwards ſtimulating by the application of a bliſter, and emptying the bowels with *tinctura ſacra*, were thought expedient and likely, with the farther uſe of fifteen grains of aſaſœtida, and double that quantity of levigated native cinnabar, thrice every twenty-four hours, to relieve her complaints. On the third day of her being in this courſe, and after cupping, the unequal tenor of her pulſe was greater than at firſt, for an interval of eight ſeconds was counted, without a ſingle ſtroke; yet, by perſevering only a ſhort time with punctuality in this courſe, all her ſymptoms gradually abated; and though ſhe was too ſoon wearied of her regularity in taking medicines, yet, by the above means, with the addition of half a grain of the martial flowers daily in each doſe, in ſix weeks ſhe recovered a perfect regularity of her pulſe, and was well enough to undertake a journey to Southampton the ſummer following, when ſhe bathed in the ſea-water, and drank of the ſame, though with greater moderation, indeed, than many people at ſuch places obſerve; and all the time ſhe was there, ſeemed perfectly well; but, ſoon after her return to London, the ſweet ſmell and taſte of her urine, unaccompanied with her former ſtoppage in her pulſe, returned partially; but theſe were removed ſoon by the following medines:

Take of the flowers of camomile powdered twenty-five grains—of the aromatic ſpecies

three grains—of rhubarb powdered two grains Mix.

This powder was taken about a week, three times a day, in a draught of camomile tea, or wine and water; and beſides this, ſhe drank every night and morning, for ſix weeks, about half a pint of alum whey, made by boiling from fifty to thirty grains of powdered roche alum, in a ſufficient quantity of new milk from the cow, to get a full pint of whey; and her ſpeedy recovery this time was principally aſcribed to the uſe of this whey, for the continued quite well for months, without any relapſe.

C A S E LXXIII.

Of a Stone in the Bladder formed on a Needle.

A Gentleman's daughter began, at two years of age, to be afflicted with cholic pains and difficulty of making water, which were commonly removed by clyſters, purgatives, diuretics, and ſome other medicines. When ſhe was three years old, her diſeaſe had more the appearance of gravel, for the ſevere pains were about the lower parts of the loins, or immediately at the extremity of the bladder; ſhe had partial obſtructions of urine, and frequent vomiting, but never complained of her back. Theſe ſymptoms, not yielding to her former medicines, ſhe was put into the warm bath; which, with injections, relieved her. She was ſo ſenſible of the benefit of the warm bath, that ſhe frequently deſired it, and ſometimes came unwillingly out of it.

Her pains and obſtructions of urine increased all the following year, the warm bath being the only medicine that gave her relief; for in it only ſhe made urine freely, at other times it either came away inſenſibly, or in very ſmall quantities at once.

When ſhe was four years and two weeks old, ſhe complained of great pain in the pudenda, putting her fingers there, as if ſhe would extract ſomewhat; all the external parts were greatly ſwelled and inflamed.

Her mother then sent for a surgeon. Upon pressing the right lip, he felt like a fluctuation of liquor in it; and on the posterior part, there was some matter: the parts were tomented with warm milk, and an emollient poultice was laid upon them.

Next day the quantity of matter was greater, and she was easier; but still aimed at extracting what pained her. The same applications were continued.

On the second day, her mother discovered a white hard substance in the passage, and the child was miserably tortured with pain. In the evening, while a fomentation was applying, a stone fell into the basin, which weighed then more than half an ounce, and was grown round a needle, the ends of which stood out.

The child was too young to give any account of what had happened to her so long before; and the parents knew of no needle she had swallowed, or of any pains she had suffered, till the colic pains, which are mentioned in the beginning of this case.

When this stone came away, there was neither blood nor matter with it, nor had she passed any blood before. After bringing away the stone, the patient still complained of gravel pains, and the urine flowing involuntarily, excoriated the skin.

CASE LXXIV.

Of an Emphysema, occasioned by Putrid Humours.

A Full-bodied, middle-aged sailor, (Michael McCann, of the *Modeste* man of war) was seized with a putrid fever and sore throat. He was bled at the beginning, but his blood appearing in a loose dissolving state, he was bled no more; a blister was also applied between his shoulders, which soon dried up.

About the seventh or eighth day of his disease, an emphysematous swelling appeared in his face, neck, and all over his breast, especially on the right side. The skin was

very greatly puffed up, and made a crackling noise under the fingers when touched, as if a half-blown dry bladder had been handled; and the patient was exceeding stiff and uneasy with it.

The chief surgeon of the Navy Hospital, and the other surgeons attending, called in a physician of great eminence, who examined it with particular care, and found the swelling altogether windy, and a compleat emphysema; and advised the fomenting it with sharp vinegar and camphorated spirit of wine; and if that should not succeed, to scarify it slightly: the swelling totally vanished in two or three days, without any scarification, and he soon recovered from the fever; but he continued very weak for a long time, and remained very scorbutic, as he was before the fever, his gums being very spongy, and bleeding on the slightest touch, or rubbing.

In this case the emphysema was generated merely by the putrescence of the humours, as is frequently observed in a less degree, in and about the beginning of mortifications of the limbs. It is certain, from numberless experiments, that putridity, both in vegetable and animal substances, generates air, or rather raises it from a fixed to an elastic estate.

CASE LXXV.

Of an unaccountable Mortification.

A Man, aged thirty-one years, was fifteen years old, when the following misfortune befel him:

He felt a spasm or cramp in his left hip, and the lower part of his leg. As this pain seized him pretty often, he consulted a surgeon, who applied several plaisters to the part affected, but without any relief to the patient. After those fruitless efforts, the surgeon made about thirty-seven incisions over the patient's whole leg, (which, to outward appearance, was become very brown) of which he was not at all sensible, unless

unless when the instrument happened to grate upon the bone; the periosteum, or membrane, which covers the bone, being still sound. His leg, however, grew daily blacker, and the pain continued both in the periosteum, and in all the bones of the upper and lower part of the leg. At last, a black circle was observed round about the muscles of the hip, as an indication of an approaching mortification. This circle appeared as visibly as if it had been separated with a knife from the other part; it ever after spread, and came to such a head, that without any other help and cure, the flesh began gradually to rot away from the bones, and at last quite fell off from the upper part of the leg, which preserved it's soundness. After this, nothing was seen but the bare tendons or sinews, hanging down like so many strings or cords; there also remained a piece of the inferior muscles of the hip, fastened to the superior part: at last, the tendons becoming dry, consumed away; and after all, the leg itself; that is to say, the thigh-bone dropped off in such a manner, that there remained about four inches between the bones and the flesh, loosely hanging down from them. The flesh at last grew up to the bones, without any manner of help, and fastened itself to the bone; and in this sound part the patient felt a great pain, whenever the weather proved tempestuous. It was remarkable, that at the same time the patient also perceived a swelling in the middle of the right-foot, the matter of which discharged itself through the toes, and was of so corrosive a nature, that it had consumed all the toes but the little one. The surgeon at length healed up the wound; but after all, there was still but little feeling or warmth in the foot.

CASE LXXXVI.

Of Retention of Urine cured by the Bark.

ON the 31st of July, one Mr. Stanton, aged about thirty, strong and robust,

who had never before been troubled with the gravel, stone, strangury, or any pain or difficulty in the urinary passage, was at once taken with a total retention of urine; for which he was blooded in two or three hours time, from his first pain, and in two hours more he had a clyster given him, which operated copiously by stool; but he could not make one drop of urine. At night, he took an anodyne diuretic mixture, to as little advantage. He was all this time in some pain, without any feverish symptom, not so much as thirst.

On the first of August, in the morning, he took another clyster, which operated very well, but without the desired effect: on which account a warm bath was ordered, and some doses of powdered millepedes and sweet spirit of nitre, from which he found no benefit. It was then proposed to sound him, but he would not consent, protesting obstinately that he would rather die; and he continued for two days more taking lenitive purges of cassia, manna, and Epsom salts, with all the diuretic salts and oils, mixed with some narcotic and anodyne medicines in different forms, but all in vain: at last, some relaxation being suspected, on the 4th of August some doses of the bark were ordered, which produced such a happy effect, that in an hour after taking the third dram of bark, he made some urine; and after taking ten drams, he was perfectly cured, and made water with great ease and in great plenty.

CASE LXXVII.

Of a Girl who spoke after she had lost her Tongue.

MARGARET CUTTING, a girl about twelve years old, of Wickham, in Suffolk, lost her tongue by a cancer, which first appeared like a small black speck on it's upper surface, but soon eat away quite to the root. Though the surgeon had pronounced the case incurable, he still used his best endeavours to relieve her; and

as he was syringing of it, the tongue dropped out, and they received it into a plate, the girl, to their amazement, saying to her mother, 'Don't be frightened, mamma; it will grow again.' It was near a quarter of a year after before it was quite cured. A clergyman, and a surgeon well skilled in anatomy, upon close inspection, found not the least appearance of any remaining part of her tongue, nor was there any uvula; they observed, indeed, a fleshy excrescence, extending itself along the left-side of the lower jaw, of about a finger's breadth, which, she said, did not begin to grow till some years after the cure. The passage down the throat, where the uvula should be, had a circular hole, opening a little to the right, large enough to admit a small nutmeg; the excrescence was quite immoveable, as the surgeon felt with his fingers, and he was assured she spoke as well before it began to grow as since. Upon asking her, in what part of her mouth her most sensible taste lay: she said, it was all over alike; and, smiling, added, she was too nice in that particular, for if her butter was not curious, she had rather eat dry bread. Though she was able thus to speak from the first loss of her tongue, yet she could not swallow solid food for many months after, without it's being minced very fine, and then thrusting it into her throat by her finger; but by degrees she got over that difficulty, and her deglutition was now as easy as in other people; owing, in a great measure, no doubt, to the fleshy excrescence. She spoke and pronounced very articulately, even such letters, words, and syllables, as seem to depend mostly upon the tongue; and she read very plainly, only it was observed, that sometimes she pronounced words ending in *ath* as *et*; *end* as *emb*; *ad* as *eib*: but it required a nice and strict attention to observe even this difference of sound. She sung very prettily; and, as before remarked, had her taste very accurate.

CASE LXXVIII.

Of extraordinary Symptoms after a Lying-in.

A Young lady, having caught cold in her lying-in, was attacked with a slight neuromonic fever and cough; which, in the country, being too lightly considered, and no bleeding at first ordered, she soon fell into a hectic emaciated state; for which she drank asses milk, and took the ordinary balsamic remedies, without any benefit for about three weeks; till one morning, being seized with a fit of coughing more violent than common, she was greatly alarmed at bringing up two or three pieces of a calcareous matter, of different sizes, from a pin's head to a small pea. Terrified at such appearances, she was conveyed to London by easy journies for farther assistance. The day after her arrival, a physician was sent for, who found her with a quick hectic pulse, night-sweats, and a difficulty and shortness of breathing on motion up stairs. Thus she remained three or four days, when another fit of easy coughing brought up, one morning, three pieces more of the like calcareous matter; which, nearly examined, resembled the consistence of a pumice-stone, and one of them almost equalled in magnitude the kernel of a small hazel-nut: and, as the strength of her pulse seemed capable of bearing it, she was advised to lose five or six ounces of blood, to adhere strictly to a vegetable acescent diet, and milk every way that her stomach would bear it; and she was allowed to eat some white of a chicken once every day. Her medicine consisted in a cold infusion of Peruvian bark in river water, with some grains of spermaceti, and a few drops of the vinous tincture of ipecacuanha, with intent to promote a glandular discharge from the lungs, whilst this preparation of the bark was expected to amend the whole of her constitution; but the ipecacuanha, even in the smallest doses, disagreed with her stomach,

mach, and soon after she grew weary of her bark. This made it requisite to devise some medicine not ungrateful to her palate; therefore, enjoining the strictest regularity as to her bed-time and hours of refreshment, and asses-milk twice a day, she was advised to take thirty or forty drops of dulcified elixir of vitriol in every glass of Seltzer water, which was to become her constant drink, without wine, or any thing else added. By this method, in about three weeks time, she began to recover her strength and spirits, and lose her night-sweats, cough, and every other bad symptom that had attended her; and she returned home seemingly quite recovered: but there, having quite discontinued drinking Seltzer water, her hectic heats recurred in her feet and hands, and also her troublesome feverish inquietudes in bed, and other bad symptoms, which formerly had worn her down. Riding on horseback was then recommended to her, and the constant use of Seltzer water, daily; which, in two months, perfectly restored her health, and she continued quite well, and never after coughed up any calcarious substance.

CASE LXXIX.

Of an Empyema.

IN January, a woman in mean circumstances but remarkable for strength and vigour, fell upon a stone, that struck her immediately under the right shoulder-blade; and complained, for about four months after the accident, of pains, not only upon the part struck, but internally through the whole breast; notwithstanding which, she went still about her ordinary affairs. About the middle of the fifth month after the fall, her pains increased to that degree, that she was reduced to lie a-bed, and a very small white tumour appeared where she first received the stroke, which very gradually increased till the beginning of September, when a surgeon was

first sent for, and found her in the following deplorable state, viz. with a violent internal pain through the whole breast; a great difficulty of respiration; a constant diarrhoea, attended with a tenesmus, or perpetual inclination to go to stool; frequent wasting sweats; great drought, and her pulse hectic; and she was about four months advanced in pregnancy. The tumour was increased to the bigness of a child's head; was very hard, and of the same colour with the rest of her skin; and it obliged her to sit, night and day, in a bending posture. In this emergency the surgeon was solicited in the most ardent manner, by the friends and relations, and by the patient herself, to relieve her of exquisite torture, though at the risk of her life; and he was at length prevailed upon to perform the operation.

After having prepared some dossils and pledgets of dry lint, compresses, napkins, and scapular, he plunged a large dissecting knife into the center of the tumour some inches deep before he reached the matter, which flowed from the wound, though very large, with the force of a new-tapped cask, till a vessel, holding two quarts, was full in about two minutes. But the velocity of egress still continuing, he did not venture to allow any greater discharge for that time; and he therefore dressed the wound with the apparatus before mentioned; gave her some spoonfuls of a cordial and anodyne mixture; ordered a decoction of the woods, with raisins, and a little of the Peruvian bark acidulated with a little lemon-juice, for ordinary drink; and panadas, gruels, or such like, with a little white-wine, for food.

On the next day, the pains were not altogether intolerable, and the patient had slept more that night than for many preceding. Her stools were found to be very much mixed with matter of the same colour and consistence, which was white and well-digested, as that which came from the

wound; and the sediment of her urine was of the same nature. When the dressings were removed, the matter issued out with the same force, and to the same quantity as the first day, the tumour continuing, notwithstanding, in exactly the same situation as before, which was dressed as formerly, with only the addition of an emollient and discutient cataplasm.

At the third visit, her pulse was neither so frequent nor depressed as before; her respiration was less difficult, and all the other symptoms less threatening; she had slept tolerably through the night, though still in a sitting posture, being unable to suffer any other position. The dressings being removed, the matter spontaneously flowed to the same quantity of two quarts, or four pounds, but not with the same force as the two preceding days. It was still well-digested; and at this dressing the tumour appeared to be abated considerably in magnitude; so that, by introducing a finger, the surgeon felt a pretty large opening betwixt the seventh and eighth true-ribs. She was this day dressed, and every thing continued as the day preceding.

At the fourth visit, every symptom appeared more favourable; and upon removing the dressings, the tumour was found to be much decreased, but the quantity of matter was, notwithstanding, as much at this as any of the foregoing dressings; only towards the latter end of it's emission, it drilled down her back, and appeared to be much exhausted. It was now dressed with the common digestive, mixed with a little balsam of Peru; and the compresses wetted in brandy. This night was the first of her lying down; and she was directed to let the diseased side be downward, to promote the discharge of the matter.

On the fifth day she was chearful; she had slept well through the night; her pulse was free, with very little frequency; and every other symptom agreed with it, ex-

cept the diarrhoea, which still continued, though not so much attended with the tenesmus, nor were her stools and urine so full of matter as before. The dressing and bed-cloaths were now found all soaked with matter; but when removed, there was a very small spontaneous discharge from the orifice, which was dressed as usual.

On the sixth day, the patient was very feeble, dispirited, and in a most languishing condition, from an abortion which happened that morning. She had a coldness and rigidity in her limbs, and frequent faintings, attended with some slight rigors; notwithstanding which, the clearing discharges continued to flow, though in a small quantity. She now frequently took a little warm sack-whey, with some drops of tincture of castor, tincture of saffron, and aromatic saline spirit, mixed together, by which she recovered her strength and spirits daily, every thing else corresponding; so that in ten days after, she was able to quit the bed, and sit some hours upon a chair. From this time, till the cure was compleated, she was dressed once in two days, for about eight weeks, when a firm cicatrice was procured, after a small exfoliation from one or both of the ribs. She has continued ever since free of all complaints, except an ague, and has borne three children.

CASE LXXX.

Of a pregnant Woman, whose broken Leg did not unite till after her Delivery.

A Woman, aged 22 years, was admitted into the Liverpool Infirmary, with the larger bone of the leg fractured obliquely in that part where, four times in five cases, it always breaks, for reasons which, on examining the bone, are obvious. She was of a delicate, lax habit, and now supposed herself to be in the second month of her pregnancy. In consequence

sequence of proper treatment, all tension and tumefaction disappeared, and the limb was quite cool and easy. At the termination of a fortnight from the time of the accident, on particular examination, the fracture appeared more loose than it ought to be; and at the end of the third week, was exactly in the same state. It did not appear probable that the want of union could be owing to constitution, as she had, only three months before impregnation, been very happily and speedily cured of a fractured thigh-bone by another surgeon; and this appeared the more improbable, as she was a sober, temperate woman: and was it not more reasonable to suppose that the want of union depended upon the pregnant state, than that it was caused by the interposition of any of the soft circumjacent parts? She was now informed that the event of the case was precarious; that it was dubious whether a cure could be obtained until she was delivered; and patience, with submission, were recommended. It was thought right to strengthen her constitution, and take all possible care of her general health. Hence, the Peruvian bark was given, and its dose increased from time to time, until she took an ounce each day; and this was regularly persevered in for the space of six weeks; at the expiration of which, all remained just in the same state as before. She was now seized with a feverish indisposition, which continued eight days; but she did not appear to be injured by it, unless being rather reduced in strength. She now requested to be removed from the hospital; after which, all necessary attendance was given her, and the surgeon was desired to attend her at the time of delivery. She went on very well in regard to her pregnancy, and there was no alteration in the limb, excepting that it was considerably swelled. At the expiration of the ninth month of her preg-

nancy, and the seventh from the accident, she was delivered; and as she recovered strength, the swelling went off, and the bone began to unite: in short, in about nine weeks from her delivery, she was able to walk about the room, and soon had a very firm and useful limb.

C A S E LXXXI.

Of the large Bone of the Leg extracted and regenerated.

IN November, Andrew Johnson, a boy, 10 or 11 years of age, complained of violent pain in both his legs. Two days after his first complaint, he was visited by a surgeon, and had then no inflammation or swelling on them. He was ordered to drink the decoction of sarsaparilla, and to rub his legs with warm cloths, which he could not suffer, it increased the pain so much.

Three days after he was visited again, when his pulse was quick; he had great thirst, and a large livid tumour appeared from the knee of each leg to near the ankles. An incision was made into one of them, and three ounces of a bloody humour were discharged: then, searching with a probe, the surgeon found the bone carious, and therefore enlarged the incision, and felt the bone with his finger. He applied warm tincture of myrrh to the sore; and the next day there was a large discharge of bloody humour, with several livid spots, from which the same sort of matter oozed. The whole length was now fomented with a decoction of aromatic herbs in wine. Tincture of myrrh was applied to the bone, and the lips of the wound were dressed with warm digesting balsam. The other leg was now opened, which had much the same appearance, and was treated in the same way; the patient was ordered to take some powder of Peruvian

vian bark, in wine, and to drink the decoction of sarsaparilla, with lime-water, twice a day.

The ninth day after the first incision, several splinters of bones threw off; and in the January following, the whole shin-bone of the one leg came out: the leg was put into a box, and being carefully dressed, was cicatrized before the middle of March.

The large bone of the other leg separated in small pieces, and was slower in the cure, not being cicatrized till the beginning of May.

In June, the boy was able to walk without crutches. In August, he fell from a horse, and broke his thigh-bone, which was cured soon; and the lad continued well ever after, being fit for any country work, with his legs straight, and only a little thickness at the ancles.

Before the bones cast out, the matter coming from the sores was so corrosive, that it blistered whatever part of the surgeon's hands were wetted with it in dressing him.

CASE LXXXII.

Of an Apoplexy, occasioned by a Fall from a Horse.

ON the 19th of July, a robust boy, of 13 years of age, when at a full gallop, fell from his horse; and those who were in company with him were so barbarous as to ride on their journey, without assisting him. The place where he fell being three or four miles from his father's house, it was three hours before his friends found him lying apoplectic in the place where he fell. As soon as they got him home, they had him blooded, and put him to bed. Nothing more was done for him until the 22d, at seven in the evening, when a physician was called, and found him a-bed, in so profound a sleep, that it was impossible even to make him look up, though his hair was pulled, and his skin

pinched in several places, and he had remained so ever since his fall. His pulse was somewhat low, and not frequent, and he breathed tolerably well; he had not vomited at all, there was no inflammation in his eyes, and no external wound or bruise could be discovered.

He was immediately ordered to be taken out of bed and put in a chair; and his friends were directed to keep him sitting up as much as they could, that the vessels of the inferior part of the body, being more pressed by their contained fluids, and consequently more distended, a revulsion might be made from the head; and that the vessels there, being more emptied, the extravasated blood might the more readily be absorbed by the veins. He was immediately blooded until his pulse sunk much, his legs were put in warm water, and the nape of his neck cupped and scarified. When all this was done, his head was somewhat relieved; so that he sometimes looked up, and answered once or twice when he was called aloud, and his hair pulled. His head was now ordered to be shaved, that a more certain judgment might be formed the next day, if there was any external wound or bruise. New-made whey was directed for his ordinary drink; and, for food, water-gruel, made of oatmeal; or wheat bread, which he took with appetite enough.

The next morning he seemed somewhat easier than he was at first, but still very lethargic, with his pulse and breathing as the day before. After a very strict enquiry, no external bruise or wound on his head could be discovered. He was again blooded to the quantity of about eight ounces, which sunk his pulse for some time; and the directions formerly given were ordered to be strictly observed, as to bathing, diet, and keeping him out of bed.

On the 24th, he seemed much easier than he was on the 23d; so that he frequently

quently answered when he was spoke to, but he was still lethargic. He was now blooded at the jugular vein, till his pulse sunk considerably, and a purgative was prescribed to be taken the next morning, being the 25th, which was to be repeated on the 27th.

Directions were also given to supply him plentifully with luke-warm whey to drink, during the operation of the purge. It was observed that the letting blood at the jugular vein made almost immediately a sensible change on him for the better; and after he had taken the two purgatives, which operated very well, he was no more lethargic: but his judgment continued impaired, and he had lost his memory so much, that he could not read one word, although before he had the fall he could have read very distinctly.

Two or three days after the last dose of the purgative, it was ordered to be repeated, and a seton to be put in his neck. The purgative operated very well, but his judgment and memory continued as much impaired as formerly, and he would not allow the seton to be put in, nor would his parents permit it to be done by force; upon which his physician left him, declaring he could prescribe no more for him, unless a seton was tried.

No farther application was made to the physician for a fortnight or three weeks; in which time he recovered his strength, and was able to walk and ride: but he was still very stupid, and his memory as bad as ever; so that, if he happened to walk to the distance of an hundred paces from his father's house, he could hardly find the way back again without a guide. And in this situation he was found by the physician about three weeks after the last purgative was administered; and then he was prevailed upon to admit of the seton. It was accordingly put on, and in three weeks he recovered his memory and judgment, and continued afterwards as well as before

the fall. The seton was ordered to be kept in five or six weeks after his recovery, and when it was taken out, a purgative was twice repeated.

CASE LXXXIII.

Of an Hydrocephalus Internus, or Dropsy of the Head.

A Healthy boy, aged 6 years, received, in November last, on the top of his head, a smart blow from a stone, thrown at him by one of his companions: of this he complained a good deal at the time; but as the wound was but slight, it was almost forgotten. In about a fortnight from this accident, he made frequent complaints of a pain in his head. As his breath was at this time unusually offensive, and his belly somewhat enlarged, this disorder was supposed to be owing to worms. In a few days, the pain of the head increased; he had a considerable degree of fever, was exceedingly restless, and lost his speech.

The second day from the loss of his speech, he was first visited by a physician. The by-standers informed him, that the fever, within a few days, had much increased: his pulse was quick, and his flesh hot; his cheeks flushed considerably, and he sweated much about the head, face, and neck. He was in a lethargic stupor, scarce sensible of any thing that was said to him, and parted with his urine and stools involuntarily: the pupils of both eyes were in the greatest degree of dilatation, and they did not contract, when a lighted candle, or any other object, was brought hastily near them; an indication of the loss of sight. The right-arm was, in a considerable degree, enfeebled; but with the left-arm and hand he was, when roused, constantly rubbing his forehead, as he rolled his head on the pillow from side to side. Though his sleeps were short, whenever he awoke, he shrieked for a considerable time. Besides frequent returns of general convulsions, the

muscles of his face, eyes, and eye-lids, were particularly convulsed; and so, at times, was his right enfeebled arm.

From considering the history of this disease, and comparing it with several others, his physician had little doubt of it's having it's source from water in the cavities of the brain, and judged that there were but small hopes of relief: he, however, ordered a blister to his head, some medicines to abate the fever, and to keep his bowels gently soluble, with proper liquids and nourishment.

For four or five days from this time, every symptom increased to such a degree, that death was hourly expected. The patient was, indeed, reduced to the greatest degree of debility: in the course of a few days more, however, the symptoms were milder; he every second day took an opening medicine; and as his feverish heat abated, he was allowed weak broth, and aliment, more nutritious than that before directed, with a small proportion of wine.

In about a fortnight from the physician being called in, his pupils contracted at times, and he gave indications of his being able at such times to distinguish objects. The convulsions, flushings, great restlessness, cryings out upon waking, and other symptoms, continued, though in a less degree, for near a month longer; by which time his sight was quite restored, and his right-arm had recovered it's strength: in about a fortnight more his speech returned, after having lost it two months; by slow degrees he recovered his strength, and continued perfectly well.

CASE LXXXIV.

Of a Dropsy, cured by a spontaneous Discharge.

A Woman, betwixt 40 and 50 years of age, had laboured under a dropsy of the belly for some years, and in that time

had taken a great many medicines by the direction of a physician. The most powerful diuretics and purgatives were given in vain; the bulk of her belly, which was very great, rather increasing; so that, at length, despairing of doing her service by medicines, and she refusing to undergo a tapping, her physicians gave over prescribing for her.

Having one day taken a pretty brisk purgative, she told one of her medical attendants that the waters oozed out at her navel. This oozing continued constantly after, but was slow and gentle, giving her no other uneasiness than what was occasioned by wetting her linens. She remained in this state from the first appearance of this discharge in the fall of the year, all the winter, without her belly increasing, but her flesh and strength wasted.

In the following May, having gone a short journey in a coach, in returning home, the orifices at the navel were so dilated, that the water gushed out in a stream, as if she had been tapped, and with great difficulty she was carried from the coach to her house, where the water continued to flow plentifully while a physician was sent for; the people about her computing that she had discharged between twenty and thirty quarts of water. When the physician came, she was so faint, her pulse so sunk, and her looks so ghastly, that he found it absolutely necessary to put a stop to any farther discharge of water at that time, by proper compresses and bandages; and he then ordered her to be laid in bed, with her head low and her feet raised. She passed the night indifferently, but recovered her pulse and spirits. The next morning, a considerable quantity more of water ran out when the wet dressings were changed for clean ones; and that day she was seized with a fever, attended with violent and threatening symptoms, such as vomiting, hiccough,

hiccough, and asthma. The fever continued in this way some days, but at length she recovered entirely, and continued that summer, and most part of the autumn, in a perfect state of health; her belly not being in the least swelled, and her flesh,

strengthen, colour, and appetite, being recovered.

In October she was seized, all of a sudden, with a colic, attended with violent vomiting, and an obstinate costiveness, which cut her off in a few days.

PRICES OF DRUGS,

AT

APOTHECARY'S HALL, LONDON.

	<i>l.</i>	<i>s.</i>	<i>d.</i>		<i>l.</i>	<i>s.</i>	<i>d.</i>
A CID Elixir of Vitriol, } per oz. - - }	0	0	6	Contrayerva Powder, per oz.	0	1	0
Ægyptiacum, per lb. - -	0	4	4	Colgotha of Vitriol, per oz. -	0	0	6
Æthiops Mineral, per oz. -	0	0	6	Columba Root, per oz. -	0	1	2
Allum, per lb. - - -	0	0	6	Crab's Claws prepared, per lb.	0	2	0
Aloes, (called Barbadoes } Aloes) per lb. - - }	0	3	0	Cream of Tartar, per lb. -	0	1	6
Alkaline Aloetic Wine, per oz.	0	0	6	Diascordium, per oz. - -	0	0	6
Antimonial Wine, per oz. -	0	0	6	Diachylon Plaister, per lb. -	0	1	8
Armenian Bole, per lb. -	0	2	6	Elixir Proprietatis, per oz. -	0	1	3
Aromatic Species, per oz. -	0	2	0	Emetic Tartar, per oz. - -	0	1	0
Aromatic Tincture, per oz. -	0	0	6	English Saffron, per oz. - -	0	3	4
Asafoetida, per oz. - -	0	0	6	Epſom Salts, per lb. - - -	0	0	6
Balsam of Tolu, per oz. -	0	1	0	Extract of Lead, per oz. -	0	0	9
Balsam of Guaiacum, per oz.	0	0	9	Extract of Savine, per oz. -	0	0	8
Balsam of Capiva, per oz. -	0	0	5	Factitious Cinnabar, per oz. -	0	1	4
Bark or Root of Mezereon, } per oz. - - - }	0	1	4	Flowers of Benzoin, per oz. -	0	0	8
Borax, per lb. - - -	0	6	4	Frankincense, per lb. - - -	0	0	10
Calomel, per oz. - - -	0	1	6	Gamboge, per oz. - - -	0	0	10
Canadian Balsam, per oz. -	0	0	9	Galbanum, per oz. - - -	0	0	5
Calcined Quickſilver, per dram	0	3	0	Galls, per lb. - - -	0	1	8
Cascarilla, or Elutheria, per lb.	0	2	0	Glauber's Salts, per oz. -	0	0	6
Chryſtals of Tartar, per lb. -	0	1	2	Golden Sulphur of Anti- } mony, per oz. - - }	0	2	0
Clutton's Febrifuge, per oz. -	0	1	0	Gum Labdanum, per oz. -	0	0	6
				Jalap, per oz. - - -	0	0	6
				Ipecacuanha Powder, per oz.	0	1	6

Lapis

1014 PRICES OF DRUGS, AT APOTHECARY'S HALL.

	l.	s.	d.		l.	s.	d.
Lapis Calameneris prepared, } per lb. - - - }	0	2	0	Russian Castor powdered, per } dram - - - }	0	2	6
Liquid Laudanum, per oz. -	0	1	0	Salt of Hartshorn, per oz. -	0	1	4
Locatelli's Balsam, per lb. -	0	2	4	Salt Prunella, per lb. -	0	3	0
Magnesia, per oz. -	0	0	8	Salt of Steel, per oz. -	0	0	6
Manna, per oz. -	0	0	6	Salt of Wormwood, per oz. -	0	1	0
Martial Flowers, per oz. -	0	1	4	Spirits of Sea Salt, per oz. -	0	0	3
Mindinerus's Spirit, per oz. -	0	3	0	Spirit of Sal Volatile, per oz. -	0	0	6
Native Cinnabar, per oz. -	0	1	6	Sugar of Lead, per oz. -	0	0	9
Nitre, per lb. - - -	0	2	0	Theriaca Andromachi, per lb. -	0	6	8
Oil of Sweet Almonds, per lb. -	0	4	0	Tincture of Japan Earth, per oz. -	0	0	8
Oil of Rhodium, per dram, -	0	10	0	Tincture of Myrrh, per oz. -	0	0	6
Opium, per oz. -	0	2	0	Tincture of Rhubarb, per oz. -	0	0	8
Opodeldoc, per oz. -	0	0	6	Tinctura Sacra, per oz. -	0	0	6
Peruvian Bark, per oz. -	0	1	0	Tincture of Soot, per oz. -	0	0	6
Prepared Calamy, per oz. -	0	1	6	Tincture of Steel, per oz. -	0	0	6
Quicksilver, per lb. -	0	5	0	Venice Treacle, per lb. -	0	6	8
Raleigh's Confection, per oz. -	0	5	0	Volatile Aromatic Spirit, per oz. -	0	0	6
Red Corrosive Mercury, } per oz. - - - }	0	1	6	Volatile Tincture of Vale- } rian, per oz. - - - }	0	1	0
Rhubarb, per oz. -	0	2	6	White Vitriol, per lb. -	0	1	2
Rochelle Salts, per oz. -	0	0	6	White corrosive Mercury per oz. -	0	1	0

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